

UNIVERSITY OF TAMPERE  
School of Management

THE POLICY OF GREEN ECONOMY  
IN DEVELOPING COUNTRIES  
AND POLICY IMPLICATIONS FOR VIETNAM

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## ABSTRACT

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Green economy is emerging as a new development trend in the World because the global economy is facing environmental and ecosystem risks. For developing economies, green economy is seen as an opportunity and an optimal choice to change the conventional economic growth model towards sustainable development. Therefore, the research topic "The policy of green economy in developing countries and policy implications for Vietnam" is chosen for this study. This study aims to clarify the concept of green economy and to examine green economy policy in developing countries, with a particular focus on Vietnam. In addition, this research suggests policy implications to promote the implementation of green economy policy in Vietnam in general and the Vietnam Green Growth Strategy for the period 2011-2020 and the vision to 2050 in particular.

This study is a qualitative study. The study is carried out by collecting documents on the implementation of green economy internationally and in Vietnam, and by conducting five in-depth interviews with experts in this field. The research data is analyzed using qualitative content analysis as a method. The analysis applies SWOT analysis to identify both internal and external factors that impact to the process of greening the economy in Vietnam.

As a result, the study identifies the characteristics of green economy policy in developing countries, the role of green economy in addressing main challenges related to environmental issues, poverty reduction, social equity and sustainable development objectives. The findings about the green policy in Vietnam show that the term "green growth" is used in the Vietnam Green Growth Strategy but, the definition of green growth has not been clearly and fully mentioned in the strategy as well as the policy documents of green economy in Vietnam. Although Vietnam has introduced the Vietnam Green Growth Strategy, it does not guarantee a successful transition of green economy or green growth. It requires both well-designed policy and the best implementation in practice. Moreover, taking of competitive advantages in transforming and developing green economy by sectors as well as promoting the shift to green production is still limited in Vietnam.

This study suggests the following policy implications to promote the realization of the Vietnam Green Growth Strategy: including raising awareness of green economy, improving the institutions and policies to promote green economy, accelerating economic restructuring, reforming economic growth model, considering the priority sectors and localities to pilot green economy and the national set of indicators for green economy as well as strengthening international cooperation and the involvement of private sector and other stakeholders in the transition.

It can be said that the study has significantly contributed to theory and practice in terms of raising awareness and understanding of green economy, especially in designing and implementing the green policy in general and Vietnam Green Growth Strategy in particular in Vietnam.

In terms of future research, the study can be considered as a theoretical study combined with the interesting practice for carrying out further studies relating to measure green economy or greening sectors towards green economy.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the study

According to the statistic of the United Nations Environment Programme (UNEP), the last 25 years of the century, the World economy has grown four times and hundreds of millions of people around the World have benefited from it, but the World is also facing an exhausted and unsustainable ecosystem, accounting for 60% (UNEP, 2011). It can be seen that, it is the result of the over exploitation of natural resources and the dependence on fossil fuels which exhausts natural resources and raises green house gas emissions (GHG) as well as causes the climate change that leads human life to being threatened globally, makes damage to economic activities, directly affects to the sustainable development objectives of many countries around the World. Further more, the global economy in the period of struggling to overcome the economic, energy and food crises leading to the consideration of a new economic development model, the green economy to achieve the sustainable development objectives and minimize unexpected impacts on the environment. This model also has been an optimal choice to enhance a new growth engine.

The concept of "green economy" is widely known and more strongly attracted by the definition and development of the UNEP. The UNEP's definition mentioned the harmonization of three dimensions: human, environment and society. In other words, a green economy means low emissions, resource efficiency and social inclusion (UNEP, 2011). In addition to this definition, the OECD has raised the definition of green growth and developed a green growth strategy (OECD, 2011) and determined the necessity to foster investment and innovation aiming at sustainable growth and creating new opportunities for development. The importance of green growth has also been recognized by the leaders of the Asia Pacific region and introduced as an initiative of United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) to achieve the Millennium Development Goals and sustainable development (The United Nations, 2015).

Particularly, the OECD has mentioned the green growth is the key to achieve sustainable development objectives in developing countries for various reasons. Firstly, the environmental risks, and exhausted natural resources have seriously impacted on developing economies because their economy tends to be dependent on the exploitation of natural resources than advanced

economies. Moreover, up to now, many developing countries have dealt with economic crisis, social inequality, energy, water and food insecurity and ecological threats. Phenomena such as premature deaths or diseases etc. relating to pollution, water quality and climate change have become more popularly and led to serious problems in these countries. As a result, people, especially, the poor are the most vulnerable. Secondly, although most developing countries have emitted a small share of green house gas emission in the total global share compared with the OECD and major economies, developing economies are estimated raising the emission in the coming time if they continue to maintain the conventional model of economic growth (OECD, 2012). In other side, many developing countries have been drivers for the growth of the global economy. This means that it is more intensive use of natural resources. Therefore, the transition to green economy is extremely significant for developing economies, as a new approach to restructure the national economy, reform growth model and change investment decisions to meet the need of sustainable development in the near future.

In this study, the term “green economy” is used to refer to the term “green growth” and includes green growth meaning. With high efforts of developing countries and the support from international community, the initial results of green economy have achieved and realized with the success stories of some developing countries in African area (UNEP, 2010). However, the concept of green economy is quite new in the World and mainly mentioned in terms of academic study while the successful experience is not really popular, especially lessons for developing countries.

In Vietnam, since the "Innovation"<sup>1</sup> (1986) up to now, the country has gained many achievements in economic growth. Vietnam overcame the low-income country threshold to become a lower-middle income country in 2009 (The World Bank, 2017). However, Vietnam has faced the exhaustion of natural resources and serious environmental pollutions because of the model of economic growth based mainly on natural resources and the increase of investment into sectors that damaged the environment and ecosystem. Moreover, the country is considered as one of the countries most affected by climate change and the seventh most disaster-prone nation in the World. In fact, more than 13,000 deaths and damaged assets have been accounted for over 6.4 billion USD over the past two decades. In coming time, Vietnam could loss over 4% of GDP if a major natural

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<sup>1</sup>A comprehensive reform, both the structure and mechanism of the economy, with the main content of abolition of centralized planning, developing a multi-sector economy and the operation of the market economy, under the management of the state, socialist orientation (Pham Quy Tho, 2015).



disaster happens and has a 40% risk of experiencing an economic loss cost 6.7 billion USD in the next 50 years (The World Bank, 2017).

Vietnam has recognized this issue and released policies related to environmental protection and green economy. The orientation and the objective of green economy were particularly reflected by the Prime Minister's Decision on 25th September 2012, No. 1393/QĐ-TTg approving the Vietnam Green Growth Strategy (VGGS) for the period 2011-2020 and the vision to 2050, that highlighted three strategic tasks (i) decreasing GHG emissions intensity and enhancing the use of renewable and clean energies (ii) greening production (iii) promoting sustainable consumption and greening lifestyle. After that, in 2014, the government raised the National Action Plan for green growth for the period 2014-2020 in order to express the view, goals, and specific solutions as the guidelines for the ministries, sectors and local governments to implement VGGS.

Furthermore, a series of legal documents and programmes relating to sustainable development, environment protection and green growth have been issued towards green economy realization but the results of green economy have been not as expected and unclear in practice.

This practice shows that, in the context that a new growth model has an important role for developing country such as Vietnam, studying the theory and practice of transition into a green economy of developing countries, especially green economy in Vietnam is very necessary and meaningful. The thesis topic "The policy of green economy in developing countries and policy implications for Vietnam" is chosen for the expectation.

## **1.2 Aim of the study**

The study is carried out so as to analyse the policy of green economy in developing countries, with a particular focus on green economy in Vietnam. Furthermore, it is to review theoretical framework of green economy and other concepts that related to, and then give policy recommendations to foster the implementation of green economy in Vietnam.

In order to address the research problem and meet the purpose of the study within the thesis topic, the following research questions are identified:

The main research question that focuses on addressing the main purpose of the study is the policy and practice of green economy in developing countries, especially examining the implementation of green economy policy in Vietnam; therefore, it is:

“What does the policy of green economy mean in developing countries and how is it applied in Vietnam?”

Then to clarify and provide additional information relevant to the research problem, the sub-research questions are determined including the concept of green economy, achievements and weaknesses in the implementation of green economy policy in developing countries, experience and lessons learnt; results of implementation of green economy policy in Vietnam and suggestions for implementing green economy policy in Vietnam. Specific following sub-questions:

- What is a green economy?
- What are learnt from the implementation of green economy policy in developing countries?
- How is the policy of green economy implemented in Vietnam?
- What are the policy recommendations for Vietnam?

To answer the above research questions, there are some assumptions, hypotheses considered as follows:

- *What is a green economy?*

One of the popular definitions is considered for the question is the definition of the UNEP. This definition has defined three dimensions of a green economy including human welfare, social equity and social inclusion and environment. It is low carbon economy development and efficient use of resources in general. This definition is going to be mentioned and given an explanation on a green economy in the Chapter 2 Literature review.

- *What are learnt from the implementation of green economy policy in developing countries?*

It is going to review and consider green economy policy in developing countries in general, then examine China and Malaysia as case studies with a similar context of socio-economic development to Vietnam to find out what is relevant experience for Vietnam. This content is reviewed in the Chapter 2 Literature review, analyzed and found out in the Chapter 4 and Chapter 5.

- *How is the policy of green economy implemented in Vietnam?*

It is going to review and assess the green economy policy in Vietnam and the application of it in practice, especially since the Government of Vietnam issued the VGGS for the period 2011-2020 and the vision to 2050. The main achievements and limitations of green economy in Vietnam are going to examine in Chapter 5.

- *What are the policy recommendations of green economy for Vietnam?*

From all review and analysis, it is going to suggest some policy implications for Vietnam in the realization of green economy policy, including the raising awareness of green economy, policy and institutional improving, particularly the policy and mechanism relating to financial support for green economy in Vietnam and so on.

The thesis is expected towards a significant meaning in term of theory so as to clarify the concept of green economy, green growth and related theoretical issues while the concept of green economy is quite new and has not been clearly determined in Vietnam. In terms of practice, the research will be a useful reference for policy-makers, economists and researchers in the process of realization of Vietnam Green Growth Strategy as well as the transition into green economy in Vietnam.

### **1.3 Structure of the thesis**

The thesis is organized in six chapters and appendix and references in brief as follows:

Chapter 1 Introduction: the chapter introduces the background of the study, including the current socio-economic development situation of the World and Vietnam, the conventional economic development model leading to environment risks and damaged natural resources. This requires a new economic development model – the green economy as well as the need to study the thesis topic. This chapter also outlines the purpose of the research, the research questions, and the structure of the thesis.

Chapter 2 Literature review: this chapter lays out the previous studies that related to the thesis topic, including the definition of green economy and related definitions and theoretical framework of green economy, then points out the gaps of previous studies.

Chapter 3 Research material and methods: the chapter describes the research method, the qualitative research in more details, including the way to collect data and the process of data analysis.

Chapter 4 and 5 Findings: these chapters specifically describe the main findings of the study in order to answer research questions including main and sub-research questions about green economy in developing countries (Chapter 4) and green economy in Vietnam (Chapter 5).

Chapter 6 Conclusions and recommendations: the chapter indicates the key findings related to research questions, discussions, policy implications for Vietnam and evaluates the study and implicates further research.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Concept of green economy and some related concepts**

##### **2.1.1 Concept of green economy**

Although the concept of green economy has quite popularly emerged recently, there is no common definition for it. The research is going to mention concepts of green economy and related concepts, as well as theoretical framework mainly introduced by the UNEP, the OECD, the World Bank (WB) and some other organizations in order to clarify the definition and basic framework of green economy.

According to the UNEP, the green economy is defined “as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” (UNEP, 2011, p.16). In other words, it means that a green economy is a low carbon development, resource efficiency and inclusive society.

Documents collected from a variety of sources show that at the international level, a series of publications of green economy introduced by international organizations such as the publication with title “A guide book to the green economy”, Issue 1 by the United Nations Division for Sustainable Development in 2012 that outlined the history and some definitions of green economy and other related concepts (UNDESA , 2012).

According to the Guidebook, the concept of green economy was first introduced in the "Blue print for a green economy" for the Government of the United Kingdom by leading environmental economists in 1989 to suggest a common definition of sustainable development and measures for appraising sustainable development projects and policy. The term was not referenced further.

The concept was later developed by the UNEP in the context of the financial-economic crisis in 2008, so it was mentioned as an idea of green stimulus packages aimed at solving the financial crisis and the recession of global economy at that time. Following this, the areas of public investment have been determined to kickoff a green economy, then the Green economy Initiative announced by the UNEP.

With the concern to the development of the concept of green economy, the UNEP has become a leading department in defining the concept of green economy as well as promoting this concept, especially the documentary preparation for the Conference on sustainable development of the United Nations in 2012 (Rio+20).

Furthermore, the concept of green economy has developed further by international experts and scholars as inclusive green economy or inclusive green growth with regarding to more emphasis on social dimension (UN Division for Sustainable Development, 2012). This is a new concept of green economy that requires further consideration and study in coming time.

Despite significant international attention to green economy in the context of increasing environmental and climate change issues, there has been no consistent definition of green economy. This shows that the concept has recognized by different viewpoints and it still needs further studies and the definition of the UNEP has been more popular in publications and studies up to now (UNEP, 2011).

### **2.1.2 Concept of green growth**

The concept was rose in Asia and the Pacific region at the fifth Ministerial Conference on Environment and Development in Seoul, Korea in 2005. Within the conference, the governments and stakeholders agreed to move the term of sustainable development to green growth. Following this agreement, the leaders introduced the plan to implement sustainable development. This can be seen as an UNESCAP's regional initiative to achieve the goals of sustainable development and the Millennium Development Goals (The World Bank, 2015).

The concept of green growth was then enhanced at the Summit of the Association of Southeast Asian Nations (ASEAN) in Hanoi, Vietnam in 2010 with the determination of a long term investment for environmental sustainability and sustainable exploitation of natural resources towards diversify and economic recovery capacity by ASEAN leaders (Division for Sustainable Development, 2012). This expressed the concept, investment decision and the vision of ASEAN countries on green growth.

In 2010, the Global Green Growth Institute (GGGI) also organised by the Republic of Korea as a non-profit organization to promote green growth as a new pattern of economic growth to achieve

key objectives such as poverty reduction, job creation, social equity, environment sustainability, the accession of clean energy and clean water and so on (Division for Sustainable Development, 2012). Then, the international community, including major international organizations such as the World Bank, the OECD and the GGGI have been interested in the concept of green growth as well as promoted and supported countries transfer to green growth, green economy (Division for Sustainable Development, 2012). As a result, separate definitions of green growth that have been identified over time by these organizations.

Within the study, the definitions of green growth introduced by the OECD in 2011 is chosen to examine that is fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies (OECD, 2011). However, like the definition of green economy, so far there is no an agreed definition of green growth and the study is going to use green economy as the concept for the whole study.

### **2.1.3 Concept of sustainable development**

The goal of sustainable development was set in 1980 by the International Union for Conservation of Nature and Natural Resources (IUCN) so as to achieving sustainable development by protecting biological resources and the term "sustainable development" was mentioned to emphasize the sustainability of development in terms of ecosystem to promote the conservation of biological resources in the World Conservation Strategy (Environmental & Society portal, nd.)

In 1987, in the report named "Our Common Future" of the United Nations World Commission on Environment and Development, "sustainable development" was defined as the development meets the present needs without compromising the ability to meet the needs of future generations (Stakeholder Forum, CIVICUS, EU, 2015). This report was as the foundation of defining the principles of sustainable. This concept emphasizes the effective use of natural capitals and the maintenance of human habitat in the development process.

The concept of sustainable development was improved at the Earth Summit in 1992 and then at the World Summit in 2002 as sustainable development is a development process that incorporates a strong, rational and harmonious combination of three aspects of development, including: economic aspect (especially economic growth), social aspect (especially poverty reduction, job generation)

and environmental aspect (especially poverty alleviation, restoring and improving the quality of the environment, forest fire prevention and deforestation and so on) (Binh, 2016).

In 1992, the United Nations Environment and Development Summit set out the Global Agenda for the 21st Century and sustainable development was defined as a development that satisfies the needs of the present generation without compromising the ability to meet the needs of future generations (Binh, 2016).

In terms of principle, sustainable development is the process of operating simultaneously three development areas: sustainable economic growth, prosperous society, equality, stability, diverse culture and the healthy environment and sustained resources. So far, the concept of sustainable development on an international level has been unified and the goal of achieving sustainable development has become the Millennium Goal.

#### **2.1.4 Concept of low carbon development**

With the terms of green economy and green growth, the term of low carbon development has recently emerged but has received lots of attention of international organizations, especially the interest in the climate negotiations in developing economies. In 1992, this concept was the first mentioned in the United Nations Framework Convention on Climate Change (UNFCCC) in Rio and known in the meaning of low carbon development strategies or low carbon growth plans (Division for Sustainable Development, 2012).

As the definitions of green economy and green growth, despite no agreed definition, low carbon development has been mentioned towards the national plans or strategies of low emission economic development or climate resilient economic growth (OECD, IEA, 2010) and it is vital for sustainable development and supports the strategies in developing countries (Division for Sustainable Development, 2012).

Up to now, more international organizations and stakeholders such as the UNEP, the UNDP, the WB and so on have been concerned low carbon development programs.

This concept in some respects focuses directly on the issue of reducing GHG emissions, but can not deny its important role to achieve the goal of green economy development in developing countries like Vietnam. The attention of the international community and donors shows that countries,



especially developing countries will receive active support of international community in the transition into green economy.

## **2.2 Principles for a green economy**

Although the definitions are useful for explanation of the concept of green economy, they have limitation in application and implementation (UN Division for Sustainable Development, 2012); therefore, some international organisations and stakeholders have defined a set of principles for guiding and addressing the concern of green economy transition. Within this study framework, three sets of principles of three organizations towards Rio+20<sup>2</sup>, as characteristics of a green economy are examined as follow:

### **2.2.1 Principles of the United Nations Environment Management Group (UNEMG)**

According to the UNEMG in 2011, a set of principles towards a balanced and inclusive green economy, including five following characteristics:

- It is an economy that guarantees growth and reducing emissions while fostering job creation and economic opportunities in areas used mainly the poor employment.
- It makes income for investing in social welfare and services that can be accessed by the poor.
- It maintains ecosystem services and biodiversity at the same time sustainable use for the poor that living depend on them.
- It promotes resource efficiency and energy variety, including the equitable access by the poor.
- It guarantees recovery of damaged environment through adaptation capacity development.

Despite poverty reduction has significant achievement in many countries, it is defined as a significant challenge in developing countries and affected more than one billion people around the World (UNEMG, 2011) while improving human well-being plays the key components of a green economy, so income and other issues of human welfare such as nutrition, health care etc. are also major concern. The improvement of well-being has become harder within the context of climate

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<sup>2</sup>Rio+20 is the United Nations Conference on sustainable development gathering leaders of State and Government from over 180 countries and major international organizations and the participation of civil society. It was organized by the United Nations in order to enhance topics related to sustainable development and took place on 13-22nd June, in Rio de Janeiro (Rio+20, 2011).

change and environment risks for the poor and vulnerable people in developing countries. To address these issues of concern, a green economy should include the above principles.

### **2.2.2 Principles of Global sustainability Panel**

The high level panel of the United Nations secretary-general on global sustainability introduced principles of a green economy that provided the guideline for green economy, green growth in 2011 (UN Division for Sustainable Development, 2012) as follow:

- It provides an engine for sustainable development, economic growth and towards poverty reduction; including a comprehensive approach of sustainable development and suitability for national conditions and situations.
- It is a recoverable growth pattern with a long-term perspective.
- Measuring achievement not just by GDP.
- Fostering green business and job creation.
- Focusing on technological, innovative, cooperative and institutive issues.
- Pricing includes both social and environmental costs. Finance must be the foundation for sustainable development.
- It enhances renewable eneries and energy efficiency.
- It is sustainable management of natural assets and environment.
- Stakeholders can involve and participate.

This set of principles does not address directly the issues of the poor and poverty reduction as the above one, but this mentions the broader issue of ensuring and promoting sustainable development; promoting growth to reduce poverty; job creation, green business and technology innovation etc. to achieve economic growth.

### **2.2.3 The set of pinciples by Earth Summit**

This set of principles was introduced by co-authors at the Earth Summit including the key principles related to green economy and sustainable development as a guide. Fifteen principles represent the consolidation of international agreements and towards further proposals (Hannah Stoddart et al., 2012) as follows:

- Distributing equitable wealth

It is fostering the distribution of wealth equitably in local countries and between countries in the World, narrowing the gaps between the rich and the poor, facilitating wildlife.

- Fair and economic equity

It is enhancing financial support and technology transfer between developed and poor countries to support the development of sustainable environment for both.

- Intergeneration equity

It is managing environment and natural assets for the next generations.

- Precautionary approach

It is using science to identify, prevent and intervene in environmental risks.

- Development rights

People and communities have rights to benefit from positive impacts of society and environment.

- Internalization of externalities

Social and environmental costs must be included in the prices, polluters have to pay for the pollution through taxes system and other regulatory mechanism.

- International cooperation

It is cooperating with the international community in the application of environmental standards. Trade-related environmental measures should not include unfair protection, and giving sustainable use of the environment, protecting the environment and labor standards.

- International liability

National actions that may have an impact on the international environment so that requiring cooperation in the development of international-legal issues.

- Information, participation and accountability

National and international institutions should ensure that all people can get information and take part in making policy as well as involve in environmental issues; at the same time, increasing accountability.

- Sustainable consumption and production

It is disseminating knowledge of sustainable consumption and production; minimizing unsustainable models and encourage using resources towards sustainable development.

- Integrated approach in planning towards green economy

Sustainable socio-economic development planning and strategy must include the involvement of all stakeholders, and all relevant departments.

- Prepare for greening

There will be costs and trade-offs in the process of greening that requires support for developing economies, including financial and technical support, especially for vulnerable people to access work and new skills training.

- Measure well-being not only based on GDP tool

To get high GDP, lots of economic activities have damaged impacts on environment, so human well-being needs to consider the quality of life and environmental goals.

- Gender equity

This is necessity for the transition into a green economy as well as sustainable development goals.

- Ensure natural assets including environment and biodiversity through a system of protecting and recovering the ecosystems and preventing damaged activities.

In sum, the concern of international organizations in defining the principles of a green economy and the diversity of the principles show that variety of objectives related to three dimensions of green economy expecting from the realization of green economy. Each organization has emphasized in specific goals however, following principles of green economy, especially for developing countries, should be considered as basic principles as follows:

In the regard of economic dimension: it requires to ensure an engine for economic growth, encourage green activities including green production and consumption, create green jobs and develop clean energies, promote science and technology and innovation; measure economic development not just based on GDP.

In the regard of the environmental dimension: it requires to identify and minimize negative and damaged impacts on the environment and ecosystem; sustainable use of natural assets and recovering and maintaining them for future generations.

In the regard of social dimension: it requires to ensure the equal access to ecosystem services and the environment as well as other social and environmental benefits, especially for the poor and the vulnerable group; provide policies to support and create new jobs for vulnerable groups in the process of transition into a green economy.

In addition, the capacity building should be considered for the governments to carry out the transition to a green economy, which is an integrated approach of planning and strategic and management, mobilization of the participation of relevant stake holders and international cooperation in promoting the green economy while enhancing the accountability of authorities.

## 2.3 Policy measures of green economy

The transformation to green economy requires well-designed policy and full application of necessary policy measures. The following policy measures that have been introduced in publications of experts and international organizations (UNDESA, 2012), a type of green economy policy measures have been set out in Table 1 below including six groups of policy measures and indicated by “Six Is”: Internalising; Incentivising; Institutions; Investment; Information; and Inclusion.

**Table 1: Type of policy measures of green economy**

<b>Policy group</b>	<b>Policy measures</b>
<b>Internality</b>	1. Taxes, charges, fees, levies 2. Cap-and-trade permit or certificate systems
<b>Incentive</b>	3. Investment incentives – low-interest loans; micro-financing; tax exemptions etc. 4. Subsidies, feed-in tariffs and other direct support 5. Removing policy distortions and incentive policies 6. Finance – PPP, long-term guarantees, phased out support, removing barriers to FDI, administrative burden, credit guarantees
<b>Institution</b>	7. Regulations – norms, standards, labelling, prohibiting, fines and enforcement, mandatory targets 8. Rights and access rights law, including intellectual property rights 9. Accountability, transparency, enforcement, anti-corruption 10. Integrated planning, decision-making and resource management etc.
<b>Investment</b>	11. Sustainable public procurement 12. Investment in natural capital 13. Sustainable agriculture investment 14. Human capital investment– capacity building, training, skills 15. Infrastructure investment in– energy, water, transport, waste, ICT 16. Innovation investment in – R&D, deployment, information sharing
<b>Information</b>	17. Voluntary approaches – information provision, labelling, CSR, targets, agreements, educational initiatives 18. Measuring progress – green accounting, green targets and indicators, carbon inventories
<b>Inclusion</b>	19. Labour market policies – skills training, job assistance, income support and benefits 20. Social protection – unemployment insurance and pensions, cash transfers, compensation for price increases, health care

*Source: United Nations for Sustainable Development, 2012*

## 2.4 Green economy outcomes

The OECD suggested the outcomes of green growth based on three dimensions including Economic, Environmental and Social components (in the Table 2 below). Some main achievements of green economy in developing countries within the research are going to indicate based on them.

**Table 2: Green growth outcomes**

<i>Economic</i>
1 Increase and more equitable distribution than GDP
2 Increased production of unpriced ecosystem services (or their reduction prevented)
3 Economic diversification
4 Innovation, access and uptake of green technologies, i.e. improved market confidence
<i>Environmental</i>
5 Increase of productivity and efficiency use of natural resources
6 Sustainable use of natural asset
7 Use of non-renewable natural capital leads to increase other typologies of capital
8 Alleviate unexpected impacts of environment and improve risk management
<i>Social</i>
9 Increase opportunities for human including income, quality of life, particular for the poor
10 Create decent jobs for the poor
11 Foster social, human and knowledge capital
12 Alleviate inequality

Source: OECD, 2012

## 2.5 Green economy in developing countries

As mentioned above, green economy is the key for developing countries to deal with lots of challenges of development (OECD, 2012). It helps them address social impacts of environmental risks (Barbier, 2016). Therefore, transforming the model of economic development into green economy is significant meaning for developing economies in the current context. Providing a theoretical framework of green growth in developing countries, the publication of OECD mentioned a necessity of green growth for these economies and a range of policy instruments, and how countries can be supported by the international community (OECD, 2012). Moreover, success stories of developing economies showed that substantially increasing investment and policy reforming fostered business reform and other aspects such as infrastructure, institutions, so it led to

an increase of green areas contributing for GDP, green job creation, energy efficiency, GHG emission reduction (UNEP, 2010). However, the publications did not review general plan or strategy or key policy of these countries related to green economy transition as well as specific weaknesses and challenges in the process of transition into green economy in the countries; therefore it is not possible to fully assess green economy policy and its implementation in practice, especially defining the main difficulties these economies are facing in pursuing the green economy.

### **2.5.1 The role of green economy in developing countries**

The role of green economy for developing economies is also reflected in the point of view of Barbier (2016) that green economy covers three dimensions, deals directly with the challenges those seem to be characteristics of this country group. According to Barbier, green growth can contribute to poverty reduction, economic growth, reducing vulnerability caused by climate change and natural disasters, energy security, and more secure livelihoods for those directly dependent on the use of natural resources. It is believed that one of the most interesting characteristics of developing economies is the potential to gain “win–win” outcome.

Some publications mentioned the concern of green economy/green growth and developing countries and focus on the importance of green economy/green growth with the poor or least developed countries. The key role of green economy in addressing the development challenges of developing countries in the current context are considered as follows:

(i) Being a new economic growth model for developing countries. These economies have characteristics of low carbon emissions, rich natural assets, but low investment in technology and they are dependent on natural resources, leading to ecosystem degradation, exhausted natural resources and climate change (UNEP U. U.-O., 2011). Therefore, the change of economic growth and development model towards policy reform and increased investment in sectors that reduce environmental and ecological risks will lead to positive impacts on human prosperity and social equity in developing countries and it is an opportunity to achieve sustainable development. Furthermore, it is a cost-effective approach, including promoting new markets of green technology, goods and services (OECD, 2013).

(ii) Maintaining sustainable natural capitals on which to build growth and well-being for human that supply the inputs for goods and ecosystem services or green jobs etc.

Natural assets are the advantages and favor of nature for developing countries, but the unsustainable use of them has led to the various consequences in developing countries; therefore sustaining natural capital will help promote environmentally-friendly sectors, such as ecotourism and other environmental services, thereby contributing to the maintenance of human well-being, especially for future generations.

(iii) Reducing poverty and addressing social equity: Achievements of poverty reduction and addressing social inequality will be gained through the implementation of well-designed green economy policy that takes into account the interest of the poor and vulnerable groups. The OECD (2013) also mentioned that it needs to provide safer livelihoods for the group of people living on natural resources such as people in agriculture activities, forest and fisheries etc. Furthermore, well implementing the programs of adaptation and mitigation of climate change will result in vulnerable mitigation to climate change and natural disasters. This is closely related to the promotion of social equity.

(iv) Improving energy accession and contributing to energy security

Clean energy sector is one of the most important contents of the transition goals into a green economy, or green energy economy. Green economy policies can help developing countries develop cleaner energy technologies and improve the accession to energy services; improve resource efficiency through investments in clean production. Enhancing resource efficiency and developing clean energies can reduce the cost of importing energy while contributing to national energy security (OECD, 2013).

## **2.5.2 Green economy in China**

### *(i) Background of green economy in China*

From a poor country, China has been the second largest economy following the United States. Since 1978, the country has annually growth at around rate of 10% (WB, 2013). Despite of getting rapid economic growth, China has faced high levels of GHG emissions, unsustainable use of natural capital and environmental degradation, leading to social problems.

Furthermore, the evidence and research shows that the Chinese economy could not maintain the high growth rate, as well as emerge political and social problems. Meanwhile, green economy is emerging as a new trend around the World. That is why China has considered a green economy model as a new engine for growth, to get sustainable development's goal. Although, the term "green

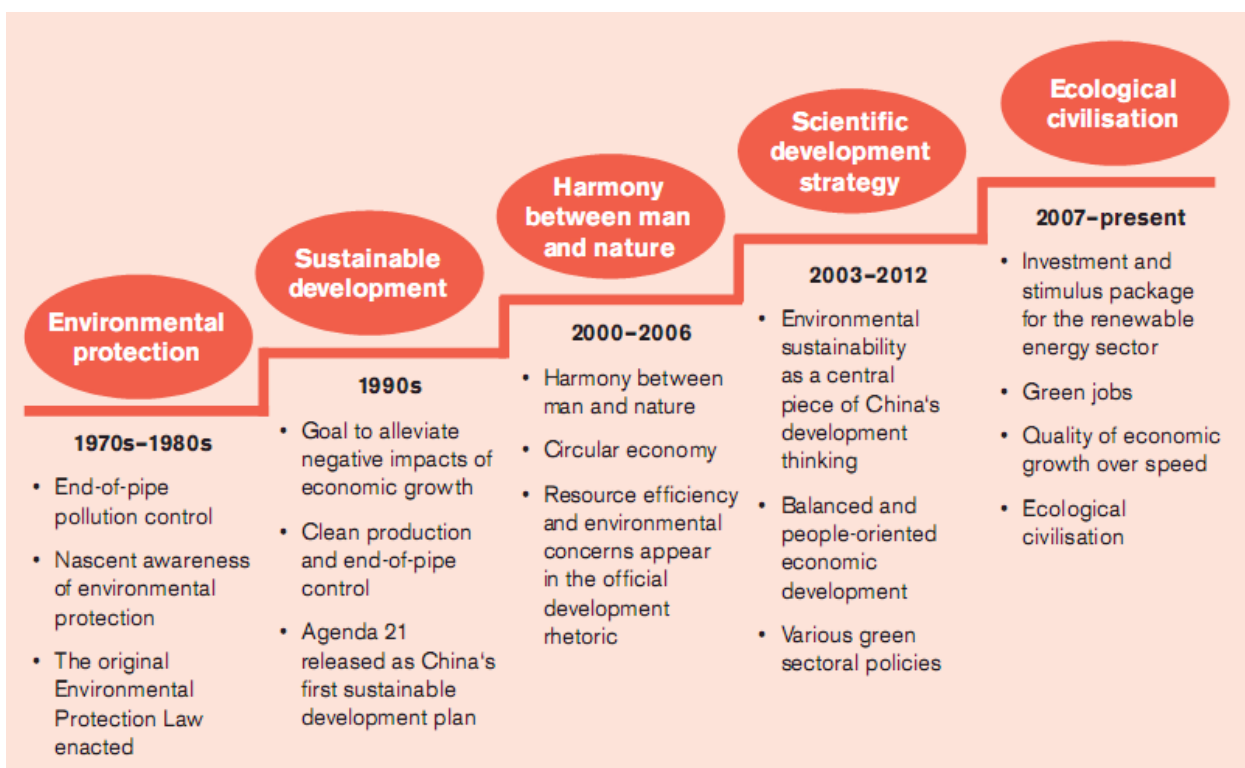


economy policy” has not been used by the government, instead of that they have various terms such as ‘ecological civilisation’ or ‘green development’ (Xiaoxue, 2015).

(ii) *Green economy policy in China*

Since the economic reform in the 1970s, which made the economy boom, China has faced with ensuring both environmental protection and economic growth. We can see the change of the thinking of green economy in China through five stages in the figure below:

**Figure 1: The development of green economy thinking in China**



Source: Xiaoxue et al., 2015

- 12th Five-Year Plan: This plan expressed the national economic development in China, including economic growth, social policies as well as environmental protection (Xiaoxue et al., 2015). This is indicated in the third stage in the Figure 1.
- The national planning policy in 2010 which divided the country’s area into functional zones for ensuring ecosystem and food security.
- The amended Environmental Protection Law in 2014

In addition to these major policies, some of the following policies are directly related to the process of greening the economy in China, including Green finance - A support financial system to green economy including green credit policies; Green production consists of laws, regulations, technical guidance and capacity building. In 2002, the Law of Cleaner production promotion was issued; Green cities that includes Eco city planning, clean vehicle policy and green building standards; Reducing carbon emissions & promoting renewable energy; Sustainable forests - Stopping deforestation and soil degradation (Xiaoxue et la., 2015).

Furthermore, an overview of the necessity of green economy in China, and determining driving factors of green economy in China as well as obstacles and challenges of green development in China are mentioned (WB, 2013; Tan, 2011). At the same time, job creation in sectors which can minimize unexpected impacts on the environment was considered as one of China's greatest expectations for the transition into a green economy and the potentials for 2020 (Jiahua et la., 2011). An other publication assessed green growth policy in Chinese cities. The theoretical framework of OECD for green growth in urban was applied to determine challenges and opportunities of green growth through some sectors (OECD, 2013).

### **2.5.3 Green economy in Malaysia**

#### *(i) Background of green economy in Malaysia*

Malaysia is one of the countries with rapid economic growth in Asia, GDP was averaged 4.1% in the period of 2004 to 2013 (Vaghefi Negin et la., 2015). The country is aiming to become an advanced country by 2020. However, like other developing countries, Malaysia's economy is based on natural resources, specifically the exploitation of petroleum and the timber industry, as a result, the issue of poverty remains a concern in Malaysia despite the progress in poverty reduction (Vaghefi Negin et la., 2015). In addition, the impacts of the financial and economic crisis in 2008-2009 led Malaysia's economy to be a slowdown in economic growth (Hussin Abdullah et la., 2017). Like as China, Malaysia has considered another development model towards more sustainable economic development, green economy society (Pursuing green growth for sustainability and and resilience, 2015).

Identifying impacts of green economy on poverty, employment, an other study applied system dynamics approach to analyze and address problems with a focus on Malaysian green economy framework for socio-economic development (Vaghefi Negin et la., 2015, 2017). Goals of green

economy were defined that focused in four main contents: labour, energy, environment and social equity and poverty; highlighted policy statements: National green technology, National policy on climate change; reviewed 10th Plan of Malaysia, as an implementation framework for green economy (EPU Malaysia, 2013). It considered the relationship between GDP and sustainable development and discussed how Malaysia would be able to implement more accurate Green GDP (Negin Vaghefi et al., 2015). Other one mentioned green economy awareness of enterprises in Malaysia (Hussin Abdullah et al., 2017). In addition, the publication reviewed the global green business potential and the potential of Malaysia in green technology services within the National green technology as well as the green technology financing scheme (ALI, 2012).

*(ii) Green economy policy in Malaysia*

Like China, Malaysia has raised awareness about environment protection and policy-oriented towards environmental issues, sustainable development, and green economy since the 1970s with the first rules for pollution management in the palm oil industry. Since 1976, the issue of environmental protection has been formally mentioned in the national five-year development plan in Malaysia. Then, the tenth Malaysia plan for the period 2011 to 2015 included measures to deal with environmental risks, sustainable use of natural capital and climate change. Malaysia's eleventh five-year plan for the period 2016 to 2020, green growth is mentioned as the opportunity to reform policies, legal system relating to green development, green technology and investment and private sector is encouraged to involve in the transition to a green economy and so on (Pursuing green growth for sustainability and and resilience, 2015).

Following main policies and measures to transition into green economy have been promulgated as follows:

- Malaysia green technology policy was issued in 2009 by the Prime Minister of Malaysia

The policy as a driver to enhance the economic development and foster sustainable development with five strategic thrusts (Malaysia, 2013). The objectives were determined as reducing energy consumption while strengthening the contribution of green technology, promoting the competitiveness of Malaysia (Negin Vaghefi et al., 2017). To mobilize financial resources for the implementation of green technology policy, the Malaysian government has introduced a series financial incentives for green technology development, including green technology financing scheme.

- National policy on climate change in the same year, 2009

The goals of the policy are mainstreaming climate change in resource management and economic competitiveness (Asia leads partnership, 2009).

In addition to these major policies, the Renewable Energy Act was enacted in 2011 is significant role in promoting renewable energy development in Malaysia, with mechanisms for feed-in tariffs (FiT) and ensured a strong incentive that encourages investment in renewable energy (Lopez, 2016, Seda, nd.).

#### **2.5.4 Green economy in Vietnam**

In term of green economy in Vietnam, there have been some journal articles mainly mentioned the necessity of green economy, green growth. There are some remarkable studies such as reviewing some legal documents of green growth in Vietnam, opportunities and challenges of Vietnam in green economy development (Shu Yuan Zhao et la., 2015; Tran Tho Dat et la., 2013); commitments towards green growth (Tran Tho Dat et la., 2013); reviewing theory and international experience of some developed countries and China in green growth policy; green growth policies in Vietnam and some programmes and projects in green sectors in Vietnam (Tran Ngoc Ngoan, 2016). Other publication mentioned some policies of Vietnam as drivers towards a green economy (Klaus Jacob et la., 2013).

In the regard of green production and consumption, these publications reviewed policy implications for green production in Vietnam (Vu Tuan Anh, 2015) and sustainable consumption and production in Vietnam, mainly focusing on green industry, small and medium enterprises in green production and the international assistance for Vietnam (N. T. Thong et la., 2017).

In term of financial and fiscal policy for green economy, green growth in Vietnam, the report assessed the status of financial policy towards green economy in Vietnam and proposed financial policy solutions for green economy in Vietnam (Nguyen Manh Hai, 2015). Other publication introduced by the UNDP that mentioned the fiscal reform of fossil fuel policy demands, including price innovation and a communicative and consultative strategy for reform (UNDP, 2014). In addition, the publication studied the involvement of enterprises in green economy transition in Vietnam, the authors gave an assumption of initial green growth was driven by enterprises through technology renovation (Ho Ngoc Thuy et la., 2016).

In term of sustainable development, reviewing the sustainable development in Vietnam in the relationship between socio-economic development, climate change, land use, and food security, the article examined these subjects in order to solve emerging issues of development, as well as potential for sustainable development in the future (Davis, Erica, 2016).

In term of low carbon development, the research of Nguyen Tung Lam (2015) considered as an important basis for adjusting the legal issues, fostering the reduction of GHG emission in industry and other sectors in the economy and other publication examined different motivating factors of Vietnam for enhancing a low carbon economy including domestic and external factors (Anne Zimmer et la., 2015).

In term of environment policy, an other publication focused on the assessment of environment and sustainable development in Vietnam in the period 1993 to 2010; provided the prediction of climate change but not mentioned the realization of the national green growth strategy (Nguyen Huu Ninh, 2014).

In sum, although there are variety of studies and articles mentioned green economy and green growth in general and green economy, green growth in Vietnam in particular, but it is still a lack of general assessment of specific policy for transition and development of green economy in Vietnam, especially, the assessment of five-year implementation of VGGS and lessons learnt from the developing countries. This chapter examines the basic theoretical framework of green economy, including the definition of green economy and some other relevant definitions, the principles of a green economy, green economy policy measures and focuses on previous studies on the implementation of green economy policy in developing countries, especially in China, Malaysia and Vietnam. The review of the publications of major international organizations about green economy are helpful for the study in term of defining the theoretical framework for green economy, especially the definition of green economy that has not been an unified definition, green economy policy in developing countries, especially implementation of green economy policy in Vietnam as well as pointing out the research gaps of previous studies as the main research problems for studying and then being described the findings in Chapter 4 and 5 and concluded in Chapter 6. The material is going to be reviewed and analyzed through the analysis steps in Chapter 3 before these.

## **CHAPTER 3**

### **RESEARCH MATERIAL AND METHODS**

#### **3.1 Qualitative approach**

According to Natasha Mack et la. (2005), qualitative research is a type of scientific research as an investigation in general to finding answers for question by applying systematically a defined process to address the question, evidence is going to collect for findings description that have not been determined before and other findings that are going to apply beyond the immediate boundaries of the study

Qualitative research consists of these above characteristics. Additionally, it finds to realize research problems or topic from the viewpoint of the local people. Qualitative research is particularly useful in collecting specific information about the values, opinions, behaviors, and social contexts of particular groups. Qualitative research can supply a complex document descriptions that experienced by people and information about human aspect of an issue including behaviors, opinions, relationships and so on. Qualitative method is effective in realizing intangible factors, such as social norms, situation of socio-economic issues in research but may be unclear.

In the qualitative research, researcher collects data for in-depth explanation through using his or her eyes, ears, and knowledge of targeted group, event and location, then they describe their results through different methods, and a researcher often uses at least two of methods for conducting a qualitative research (Crossman, 2017). There are various methods for collecting and analyzing qualitative data, such as: in-depth interviews, focus group, participant observation, direct observation, open-ended surveys and content analysis etc. Within this study, the author considers some of them relating to the topic:

- In-depth interviews: Researchers organize interviews through talking with interviewees in a one-on-one setting. A researcher can introduce a prepared list of questions or topics to participant for approach of the interview and discuss with him or her but the discussion is developed based on the interactions of the interviewee. In other situation, the researcher has determined the certain major topics or concerned subjects without formal guiding questions, the interviewee can guide it.

- Focus group: organizing focus group, a researcher sets a conversation with a small group of participants to collect and develop data related to research questions. Focus groups can be held anywhere and include from 5 to 15 participants. This method is often applied by social experts in examining an event or trend that appears within a specific community (Crossman, 2017).

In this study, two methods above are going to apply for collecting all the necessary data relevant to green economy topic.

- Content analysis: Researchers consider the use of words and images to point out conclusions about the problems. Over the last decade, digital and electronic content analysis, including digital material that produced by social media users, has become a popular method in social science. This method is very helpful for data analysis in the study.

It can be seen that qualitative research has lots of strengths and efficiency in gathering data about the behavior, value, and social context of specific issues, in realizing intangible factors, such as socio-economic status etc.

Comparing to the aim of the study, in order to address research questions related to green economy policy in developing countries and how is it applied in Vietnam in the global context of emerging attentions on promoting green economy, the selection of qualitative research is appropriate for this research topic.

## **3.2 Data collection**

### **3.2.1 Document collecting and analysis**

The study is going to use the document analysis method as a systematic approach for reviewing and considering materials, both printed and electronic documents (computer-based and Internet-transmitted form). The document analysis requires the data collection to be considered and explained in order to point out meaning, obtained learning, and improve empirical knowledge, this is similar to other methods in qualitative research (Bowen, 2009).

This is a common and effective method to examine the data for doing the research. According to Bowen (2009), document analysis is particularly well applied to qualitative case studies as in-depth studies generating rich descriptions of a phenomenon, event, organisation etc. In general, all types of document can be meaningful for the researcher in improving understanding, and finding out the contents related to the research problems.

With the thesis topic, various documents including printed and electronic materials are mainly collected from different official sources such as from major international organizations such as the UN/UNEP, the UNDESA, the OECD, the UNCTAD, the WB etc. and some organizations of Vietnam such as the Center for Information and Documentation, under the Central Institute for Economic Management (CIEM), under the Ministry of Planning and Investment (MPI), the Ministry of Natural Resources and Environment (MONRE), the Ministry of Science and Technology, the Ministry of Agriculture and Rural Development, the World Bank in Vietnam etc. and other materials from official websites of these agencies/organizations as well as through the library/e-library of agencies such as CIEM, MPI, WB in Vietnam, economic universities, including Tampere University Library etc.

These include publications of international organizations, agencies; reports of ministries, studies, research projects, books, e-books; theses, international journal articles. Most of them are international publications, except some documents, reports of ministries etc. relevant to implementation of green growth in Vietnam are published in Vietnam. In total, there are nearly 100 reference documents, in approximately 3,000 pages, published from 2010 up to now, a few older documents related to research methodology, in which main documents related to research topic are mentioned and cited in Chapter 2 Literature review as well as presenting in details in the references of the study.

### **3.2.2 Interviews**

The study tries to gain detailed and intensive information from participants as experts involved in green economy topic in order to clarify the related theories and answer the research questions as well as enrich the findings with experience, practice and real life of the experts. For these reasons, together with the use of document collecting method, semi-structured interviews are also set to collect data for the study.

According to Nigel Mathers et al. (2002), semi-structured interviews approach a range of open-ended questions towards the research topics that the researcher expects to collect information. Although, the research topic is identified through the answering open-ended questions, both interviewer and participant can discuss in more detail some topics. In cases the participant finds a question difficult to answer or only gives a short answer, the interviewer may use the suggestions to encourage the participant to answer further questions. In the semi-structured interview, the



interviewer also may probe freely the participant to examine the original answer or follow the introduction given by the participant.

In order to get valuable and intensive data for the study, the interviews were conducted with some experts involving in green economy topic. They were asked for participating in the research. They included 5 interviewees, from public sector, working as policy makers, economists and researchers. Preparing for the interview, the interview themes and questions<sup>3</sup> have been carefully designed to collect expected information for answering all research questions. Most of the questions are open-ended ones, following by probes, only a few closed questions so that both interviewer and interviewee felt free and flexible to interact. The interviews were all carried out in 2017 and in Vietnamese. Some questions were sent to the interviewee via e-mail because of limited time of interviews. Depending on the time of interviewee, the interview took from one to two hours and all were noted carefully by the author. After each interview, the responds were shortly written and completed with key points, then categorised based on similar patterns, and numbered by the related questions or themes.

The list of interviewees<sup>4</sup> including position and information about their agency/department the participants work for. All of them were chosen by their involvement in green economy, green growth topic and related issues.

### **3.3 Data analysis**

#### **3.3.1 SWOT analysis**

Applying qualitative methodology for the thesis in which the author is going to use SWOT analysis to determine the opportunities as well as challenges of Vietnam in transition from brown economy into green economy. From that determination, fostering strengths of Vietnam in the development of green economy and minimizing threats in the process of green economy and then considering some policy implications for Vietnam.

The SWOT stands for Strength, Weakness, Opportunity and Threat, in which Strength and Weakness present internal factors of the problem/ organization while Opportunity and Threat present external of the problem/ organization. According to Val Renault (nd.), a SWOT analysis

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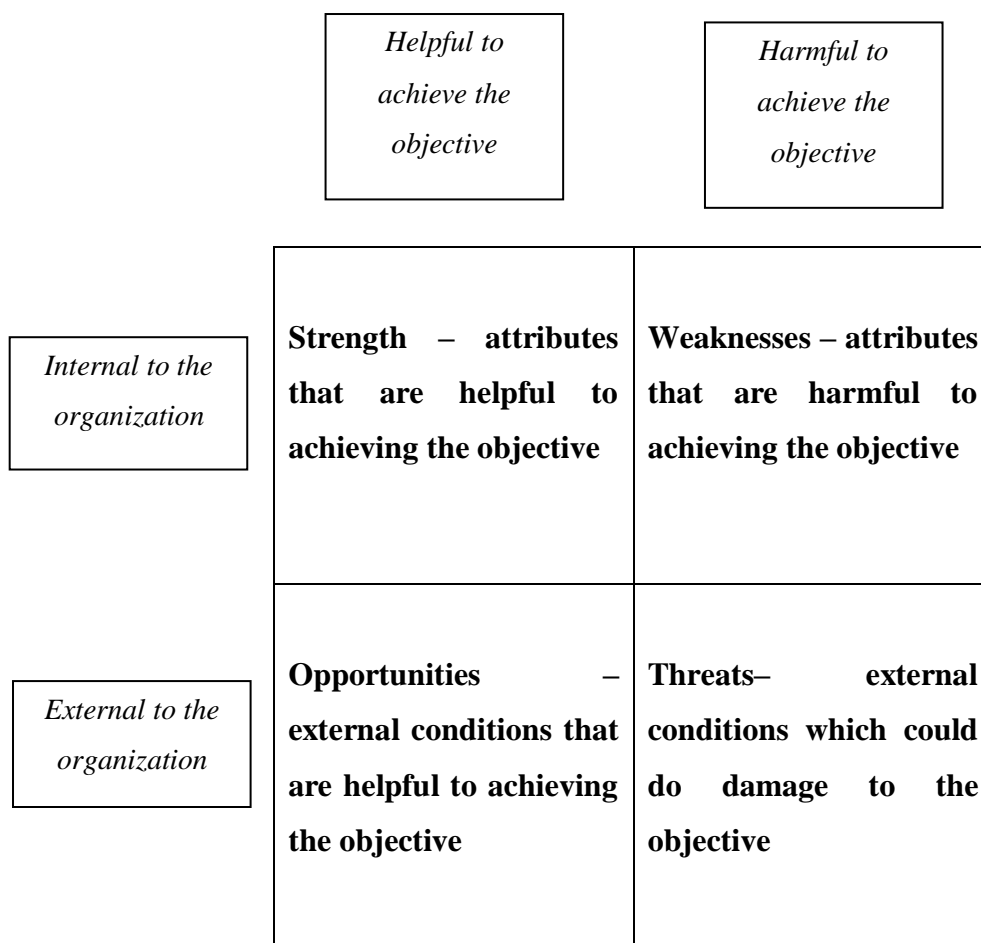
<sup>3</sup>See the Appendix 1

<sup>4</sup>See the Appendix 2

helps you define what are strengths and weaknesses of your organization, as well as further opportunities and threats. This improves and develops a comprehensive awareness of the situation in order to leading helpfully with both decision-making and strategic planning.

The SWOT analysis was originally developed for business and industry, but it is quite useful in other work as well as in exammining the strengths, weaknesses, opportunities and threats of Vientam in pursuing a green economy. The SWOT analysis model is described in the figure below.

**Figure 2: SWOT Analysis**



To apply the SWOT analysis, some following questions are going to be examined for answering:

**Strengths**

- What are the advantages of Vietnam in realization of green economy?
- What are the potentials of Vietnam but other countries do not have?
- What factors/sectors that can promote green economy in Vietnam?

### **Weaknesses**

- What Vietnam can improve?
- What Vietnam should avoid?
- What factors affect the transition into green economy in Vietnam?

### **Opportunities**

- What are the opportunities for green economy in Vietnam (Change in the model of economic development, change in technology and innovation and markets, change in the society, employment, lifestyle, consumption etc.)
- What is about the trend of development?

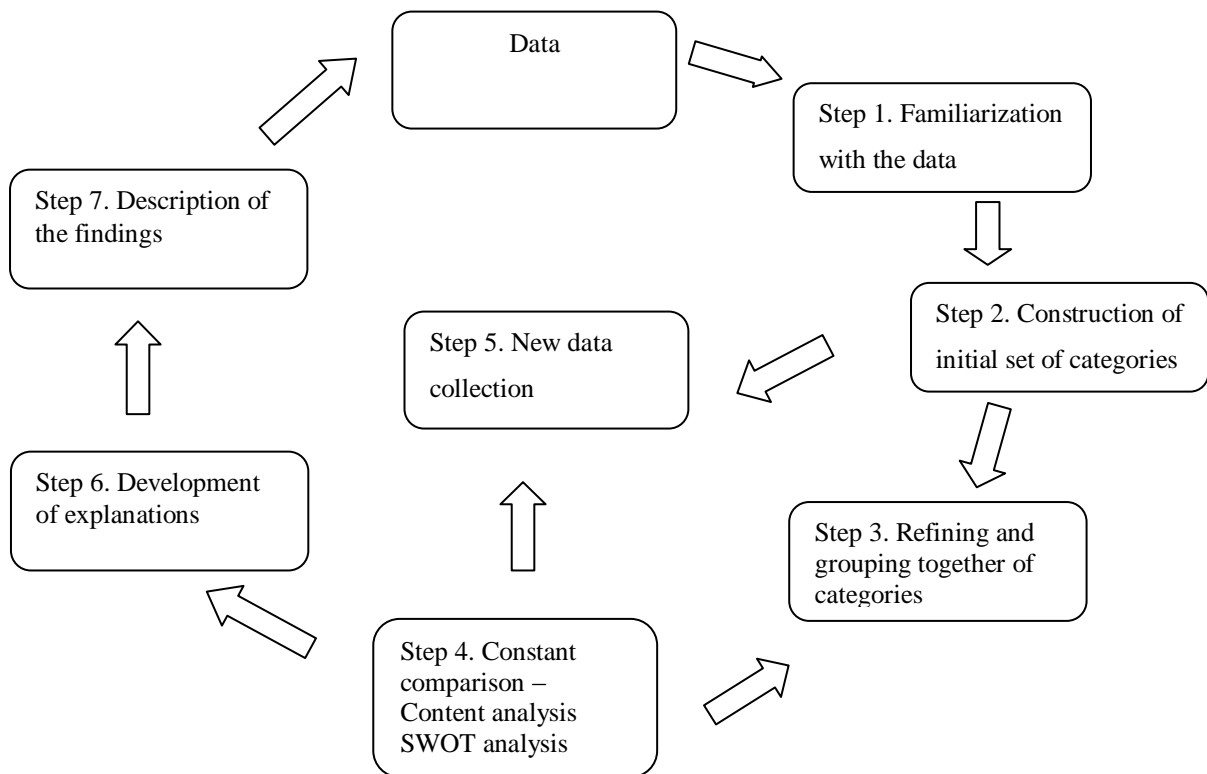
### **Threats**

- What obstacles is Vietnam facing in transition into green economy? (the demands on capital investment, innovation of science and technology, skilled human resource etc.?)
- What weaknesses are threats of Vietnam?

### **3.3.2 Data analysis process**

The data analysis process is based on the process of Laurence.Kohn et la. (2013) and simulated by the figure 2 as follows:

**Figure 3: Process of qualitative analysis**



The steps of qualitative analysis for the study in figure 2 are described below:

*Step 1: Familiarization with the data*

To get familiar with the data, a qualitative analysis often begins with the preparation of the data collection and a first reviewing of the transcripts from the interviews as well as the notes (Laurence.Kohn et la., 2013). For this step, all data – both printed and electronic forms are checked, logged in through reading all, skimming and scanning; checking the accuracy. Quality of measurement plays a major role in most social study. Data collecting process needs to ensure that they can contribute accuracy to help confirmation of the general quality of the analyses (Trochim, W. M. K, 2006).

The database then to be stored on the computer for the analysis with two options, including database programs and statistical programs. In addition, establishing a printed codebook is to give information about the data and make a title to indicate where and how it can be accessed for printed materials.

*Step 2: Building of initial set of categories*

The following step is to read and re-read all the data for developing a deep understanding of the data so that an initial set of themes or set of categories is established or being coded text, or giving a label or a name; for instance: green economy definition, international experience, Vietnam green economy, green economy guide book etc. Some non-relevant data is omitted and opposite ones to themes or discussed contents are taken note (Trochim, W. M. K, 2006).

*Step 3 to step 5: Refining and grouping together of categories*

In this step, data categories are further selected and reduced by grouping together. In this step, content analysis and SWOT analysis are applied in order to realize some new categories and concepts arising from the data through constant comparing (Step 4), for example: low-carbon development, inclusive green economy, principles of green economy etc., so some new data is needed to collect new ideas or emerging insights from the analysis (Step 5).

*Step 6: Development of explanations/ theory construction*

The next step is very important in defining new point of views, new problems or some thing is different from analyzed and explored data about green economy and related issues. These determinations lead to the final step.

*Step 7: Description of the findings*

After six steps of analysis, the final step is very important to present and describe the results/findings obtained from the document analysis and interviews, including conclusions and recommendations for the study.

## **CHAPTER 4**

### **FINDINGS OF GREEN ECONOMY IN DEVELOPING COUNTRIES**

In this chapter, empirical results from the document analysis and interviews will be presented. The main findings of green economy in developing countries as follows:

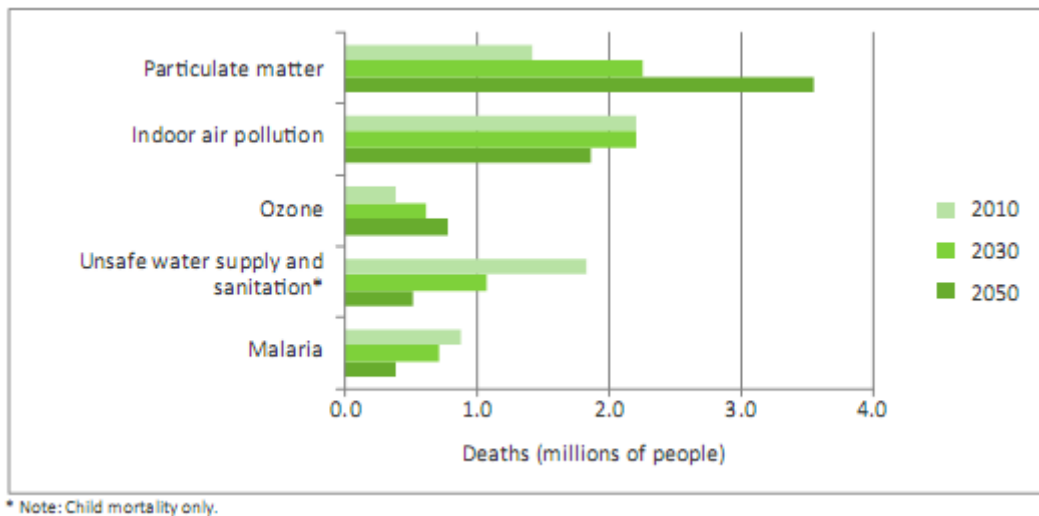
#### **4.1 Environmental challenges and the dependence on natural resources in developing countries**

It can be said that the current economic development model of developing economies relies on the intensive exploitation and use of natural resources. This is mentioned in some publications of World Bank and OECD that in low income economies, natural capital account for 25% of total asset per capita while in OECD economies comparing to only 2% (OECD, 2013). Over exploitation and unsustainable use of natural resources lead to the depletion of natural resources and many observable environmental consequences and become core of many developing countries in the World, including some Southeast Asian countries like Vietnam.

Vulnerability that caused by environment risks in developing countries is the most serious to human well-being because of: (i) their economic development is based on the exploitation of natural resources, leading to unsustainable use of natural resources; (ii) unable to access essential conditions and services for life such as water, food, energy and infrastructure; (iii) environmental pollution – air, water pollution etc. while urbanization and population are growing fast; (iv) the majority of population live in rural areas and their livelihoods are based on natural conditions; and (v) they are high vulnerable due to the impacts of climate change, such as droughts, floods, sea level rise, etc. (OECD, 2013).

Data related to the vulnerability caused by environmental risks in developing countries has been calculated by the OECD (2013) in different areas relating to water demand, premature deaths etc. Following this, the growth of dangerous emissions from transport and industry leads to the global number of premature deaths caused of airborne particulate matter is projected to more than double from today's levels to 3.6 million a year by 2050, widely surpassing malaria as a global killer.

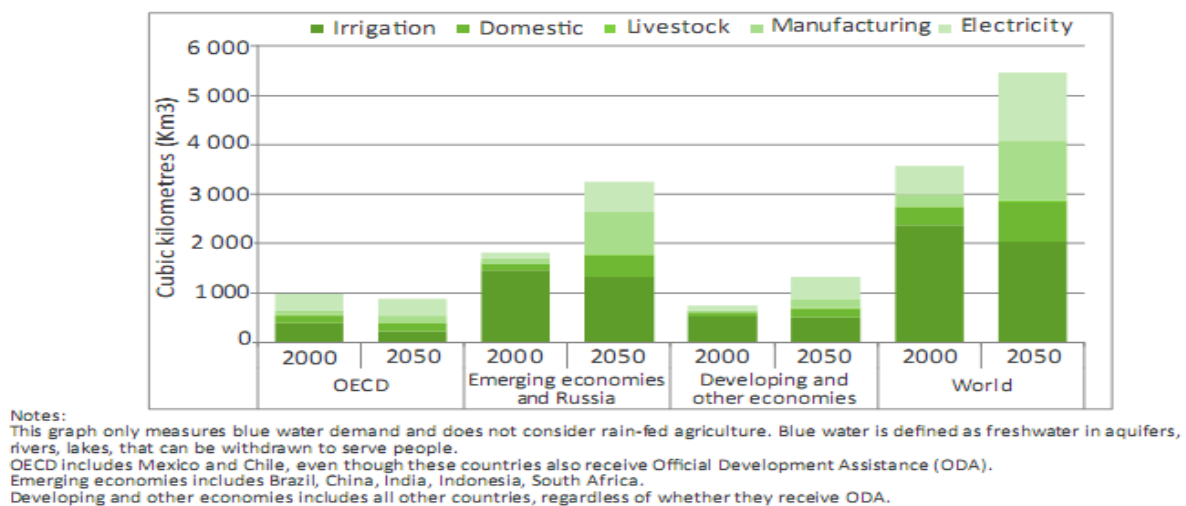
**Figure 4: Global premature deaths caused by environmental risks**



Source: OECD, 2013

In term of water demand, one more billion people will live in heavily water-stressed areas by 2050, with developing countries facing extreme hardship. Water demand is estimated to grow significantly in developing countries by 2050, while it is expected to decrease in OECD countries (OECD, 2013).

**Figure 5: Global water demand in 2000 and 2050**



Source: OECD, 2013

Further more, global biodiversity is estimated to decrease by an additional 10%, which leads to essential ecosystem services lose. The conventional growth model can lead developing countries to lock economics into emission-intensive development. As a result, by the end of the century, there

will be an increase of 50% of total global greenhouse gas emissions by 2050 and an increase of global temperatures from 3 to 6°C (OECD, 2013).

In addition, developing countries is affected by the climate change; this threatens water security, the livelihoods of poor people and agricultural productivity. According to the Intergovernmental Panel on Climate Change (IPCC), crop yields in some African countries are estimated to fall by 50% by 2020 and net crop yields revenue may fall by 90% by 2100 because of climate change and related weather problems (OECD, 2013).

It can be seen that environmental challenges, climate change and social inequalities in developing countries are closely interrelated and directly affect the important goals of poverty reduction. This shows that the current economic development model is no longer suitable and poses many challenges for the sustainable development goals. It is time to consider a new economic development model, a green economy.

## **4.2 Green economy in developing countries: achievements and challenges**

### **4.2.1 Achievements**

#### *(i) Achievements on economic aspect*

According to OECD, most of governments in developing countries are more concerned with green growth and identification of specific areas of their country in terms of comparative advantages, specific contents including carbon taxation, green energy funds, ecosystem services programs, renewable energy initiatives, sustainable public procurement, natural resource management initiatives etc. (OECD, 2012). In the Southeast Asian region, the attention of green economy was shown in the summit of the Association of Southeast Asian Nations in Hanoi, Vietnam in 2010 with the State of ASEAN leaders about green growth including long-term investments in environment and sustainable use natural resources (Division for Sustainable Development, 2012).

The actions of these governments are important as pre-conditions for the enactment and implementation of green economy policy in these economies. Although the achievements have not significant like the results of developed economies in Europe such as Germany, Norway, Sweden, Finland, Denmark or Korea, Japan etc. in Asia but initial results of developing countries are significant meaning. It showed that awareness of green economy has been increasing and many developing countries have realized green economy as a new opportunity for their socio-economic



development in the near future. The initial achievements have covered all three components economic, environmental and social of green economy.

One of the most important achievements of many developing countries in terms of economic dimension is renewable energy initiative. Energy plays an important role in economic activities in any country. The shift in the use of conventional energy to green energy directly contributes to the transition into a green economy; therefore renewable energy policy is the goal of many developing countries in pursuing a green economy. Renewable energies including solar energy, wind energy, small-hydro, biogas and waste energy have realized in some African countries such as Kenya, Tunisia etc. in order to diversifying electricity generation, ensuring national electricity security, reducing the dependency on petrol import, reducing electricity costs for consumers and enhancing income and job creation as well as contributing to poverty reduction and environmental protection goals. For instance, in Tunisia, energy saving expected from the Solar Energy Plan could be 22% in 2016 and a reduction of 1.3 million tonnes CO<sub>2</sub> per year (UNEP, 2010).

These results have been obtained by governments using various policy measures such as Feed-in Tariff (FIT) (in Kenya), setting up the National Fund to support renewable energy and energy efficiency, VAT exemption, customs duty reduction, or reduced interest rate, subsidy providing (in Tunisia) as well as the active support of the UNEP.

Other successful sectors are transport and urban management. Innovative approaches in public transport and city management (in Brazil) including the use of Bus Rapid Transit (BRT) so as to reduce fuel usage, save time caused by congestion; establishment of industrial city, Curitiba towards sustainable growth and strict environmental protection. The industrial city has provided 700 companies including information technology and BRT bus producing companies, as a result, 50,000 direct jobs and 150,000 indirect jobs have been created. The awareness on waste treatment, including waste separation and recycling are rising (70% of the city's residents on recycling, 13% on recycled solid waste in the city compared to only 1% in Sao Paulo city) (UNEP, 2010).

It is clear that, the policy approach towards green economy, and the investment and active support of the developing governments as well as the international support, economic benefits have been significantly created. Moreover, economic benefits also come with the benefits of reducing environmental pollution and promoting social equity through reducing poverty and accessing to employment.

*(ii) Achievements on environment aspect*

The results of environmental dimension are related to agriculture, rural, forestry and urban areas, including organic farming system<sup>5</sup> established (in Uganda) that transformed the conventional agricultural sector into organic agriculture, sustainable agriculture; ecological infrastructure in rural area, water conservation (in India), forestry management and restoration (in Nepal), green urban (in Brazil).

The greening industries, sectors above has led to improve livelihoods for local people, contribute to poverty reduction goal through exporting organic products and mitigating climate change, reduce chemical use (in Uganda). By 2003, Uganda was the 13<sup>th</sup> World largest land area for organic agriculture production. The GHG emissions per ha in Uganda have been estimated to be average 64% lower than the GHG emissions from conventional agricultural production. Furthermore, they have been restoration and maintenance of ecological infrastructure in rural area in India, including soil restoration, water conservation (UNEP, 2010). In the period 2006 to 2008, 850,000 water conservation works funded and completed by the government; jobs and training were provided for farmers; 615 rural districts in the country were benefited by the programme.

In term of forestry, Nepal has contributed to restore forest resources through establishing Community Forest User Groups, including forest management and local users while the government as a supporter and facilitator. As a result, ¼ national forest in Nepal has been managed by 35% population, in which user groups have functions of operating plans, setting rules of harvesting and product prices and so on. The benefits have been made through employments and income from forest protection and products. This directly contributes to natural conservation and inclusive growth.

Many developing countries have marked green economy development in sectors related to agriculture and rural areas but Brazil has succeeded in implementing green urban policy through land use planning combined public transport infrastructure providing. As a result, it is significant reduction of CO<sub>2</sub> emissions and the rate of urban air pollution is very low while the rate of using BRT buses is 45% of journeys. Moreover, the government also controls flooding problems in

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<sup>5</sup>Organic agriculture is defined by the Codex Alimentarius Commission, which fosters and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity. It bans the use of drugs, fertilizers and pesticides (UNEP, 2010).

Curitiba through putting the flooding area into the park that filled with trees and artificial lakes. This offers green area while the cost for this strategy is five times less than the cost for building canals so that contributes to poverty reduction in this area.

With such remarkable results, the governments of these economies have adopted many policy measures to promote green economy, including promulgating laws, issuing policies, rules to regulate and manage the relevant issues such as Organic Agriculture Policy, Poverty Eradication Action Plan in Uganda, National Rural Employment Guarantee Act in India, the Master Plan for the Forestry Sector, Forestry Sector Policy, the Forest Act and the Forest Regulations in Nepal. Furthermore, the governments have played an active role in financing, support and adoption of standards for the work and projects and sectors toward green economy.

*(iii) Achievements on social aspect*

It can be said that the results on the economic and environmental dimensions have implications for the social dimension, the following analysis will show more clearly the social achievements. The achievements on social aspect related to enhance together different stakeholders for natural resources protection, improve livelihoods, job creation and support the poor. The establishment of the Fund for the Protection of Water (FONAG) in Ecuador as a trust fund that water users including farmers, hydropower companies, industries and households contribute to; then the fund has financed watershed management projects in micro river valleys and longer-term programmes (more than 20 years) related to environmental education, communication, forestry and other training. The projects and programs have attracted different stakeholders together and brought benefits for local people, especially farmers and the poor.

Other example of social aspect comes from India with a job guarantee scheme that introduces a legal guarantee of employment for up to 100 days per year to adults who are manual and unskilled laborers with the statutory minimum wage (approx. US\$ 2.47) in rural area. It is to promote job creation, skill development and improve the living conditions of the poor (mainly women and minorities) in rural areas and protect environment including water and soil conservation, land development and so on. It is necessary to assess the long-term effectiveness of a purely governmental approach as well as how the scheme could be fostered by the involvement of the private sector to deliver better quality, offer long-term employment opportunities, and promote market oriented skill development (Oxford policy management, UKAid, 2014).

#### 4.2.2 Challenges

Despite of obtaining the achievements in the process of green economy transition in many aspects and in different sectors, these economies have faced many challenges in the transition into green economy and most of the difficulties are due to the underdeveloped economies. This is also mentioned by Barbier and OECD (2016, 2013) that the various challenges facing developing countries in implementing green economy policy, including the large informal economy, high levels of poverty and inequality, weak capacity and resources for innovation and investment, and inadequate governance and institutions. The challenges of transforming to green economy in developing economies will be clarified as follows:

*Firstly*, the informal economy has accounted for a large proportion in many developing countries. This complicates the application and implementation of green economy policy in terms of fiscal policy, investment, labor and other policy measures relating to green economy. According to Funds for NGOs (2009) the phenomenon of informal economy is very popular in developing economies and it usually accounts for the largest share in the national economy, however, it is very little realized. According to Paul E. Bangasser (2000), the activity of informal sector is largely unmindful, hardly supported and sometimes actively prevent by the government. As a result, workers in the informal sector have faced employment problems such as minimum wage, long working hours, bad working conditions and limited accession of social protection mechanism. It is difficult for micro enterprises in informal economy to access to forms of finance. It accounts for up to 75% of non agricultural employments in Sub-Saharan Africa and over 2/3 in South and Southeast Asia (OECD, 2013).

The basic principles of a green economy or green growth show that economic growth and development must be measured, promoted employment, labor and social equity, especially for the poor, however, the informal economy accounts for a large proportion, which causes many obstacles in the implementation of policy measures that promote green economy; therefore, under the informal economy, it is difficult to measure and improve the awareness of green economy in developing countries.

*Secondly*, for developing countries with the popularity of poverty and inequality, the implementation of green economy policy in the short term will impact on the poor and the the vulnerable group. This requires governments to adopt policies with taking the problems into account and implement pro-poor programs in order to minimizing negative impacts on the poor.

*Thirdly*, it is due to the characteristics of the poor economies, developing countries face many challenges compared to developed countries in mobilizing resources in both public and private sectors for the demands of investment for the transition to a green economy. Moreover, other challenges are from weak technology innovation, management capacity and the ability to access and exploit the opportunities for green economy from the international communities.

*Fourthly*, it is a high demand for economic growth to ensure multi development goals and welfare improvement. In lower income countries, where natural assets are frequently rich and abundant so the welfare and income returns from transitioning to green economy does not realize as those from conventional economic growth, particularly in the short term.

*Fifthly*, it is lack of mechanisms to ensure the protection of natural assets and green economy transition. Without strong incentives, the realization of green economy will be weakened. The socio – economic characteristics and priorities of developing economies require a mix of policy instruments compared to separate policy instruments for developed countries. So, the support of the international community in terms of finance, technical support and trade can provide the helpful incentives and a political force for moving towards green economy (OECD, 2013). Some evidences from Pakistan and Nepal in the box below examined for the argument of these challenges.

It can be seen that green economy can bring important benefits to developing countries in the long term but their governments need to calculate and assess the necessary costs related to the transition; the full awareness of trade-offs, especially in the short term, these related to economic growth, employment, investment, etc. The relevant stakeholders, including the private sector need to encouraged to involve and problems relating to the poor and vulnerable people needs to be addressed.

### **4.3 Case studies of green economy in China and Malaysia**

#### **4.3.1 China**

In terms of green thinking development, China was a country with a very early awareness of environment protection in the 1970s, as China's economy boomed while emerging environmental risks, and then the government enacted the original Environmental Protection Law in 1989.

The development of green thinking in China consists of five stages and each stage is marked with specific objectives and concepts as follows: the first stage (1970s-1980s), it was the realization of environmental protection and the introduction of the original Environmental Protection Law. The second stage (1990s) released the Agenda 21 of China, focuses on the sustainable development and clean production. The third stage (2000-2006) mentioned the concept of circular economy, the harmony between human and nature and resource efficiency. The fourth stage (2003-2012) was towards scientific development strategy that determined various green sectors. It was remarkable with the rapid development of renewable energy and the last stage (2007 up to now) has invested and stimulus package for renewable energy enhanced green jobs and mentioned the concept of ecological civilization. It can be seen that, over the last 40 years of development, green thinking in China has gradually improved and realized by specific policies and practice relating to green economy.

In terms of green finance, China has established a strong green financial system that provided green credit policies for the transition to a green economy with the involvement of key stakeholders in the financial system, including the State Bank of China, the MOF, the China Banking regulatory, the Commission of China Securities, the Commission of China Insurance, banks and funds in China (Xiaoxue, 2015). This shows that, unlike other developing countries, China has prepared a potential national financial system to support the transition to a green economy, rather than relying on financial support of international communities in most developing countries, especially many countries in Africa region.

In terms of greening sectors, China has been successful in identifying and developing potential sectors such as renewable energy, sustainable forests, green cities those has remarkable development, especially renewable energy sector. China has set a target of increasing the share of renewable energy to 15% by 2020 while total energy consumption will continue to rise and coal will remain dominant (Mun S. Ho et la., 2014). In 2009, China passed the United States to become the largest energy consumer in the World (Jiahua, 2011) and the largest CO<sub>2</sub> emitter, with about 9.9 billion tons, accounting for 29% of global CO<sub>2</sub> emissions in 2012 (Mun S. Ho et la., 2014). Therefore, the government considered to increase the share of renewable energy, particularly wind and solar power towards emission reduction and enhance the vital role of supplying green energy in China. As a result, green energy, including solar hot water, solar photovoltaic, and wind power are rapidly developing in China. China has made impressive achievements in solar water heating. Chinese companies manufactured 31 million square meters of solar water heaters, accounting for

76% of global production and the country represented more than 80% of the World total and it was by far the World's leading manufacturer of solar water heaters as well as technology leading in 2009. This leads towards the 2020 goals that solar water heating will replace 122 million tons of coal, equivalent to a reduction of 262 million tons CO<sub>2</sub> emissions (Jiahua, 2011).

In terms of Solar Photovoltaic (Solar PV) manufacturing, China became the largest PV manufacturer in the World, passed Japan and Europe (Xiaoxue, (Nagalakshmi Puttaswamy et al., 2015) with 98% of its product exported overseas by 2008. The government has determined solar manufacturing as a strategic industry and enhanced it through a combination of low cost debt and subsidy, addressing the financial and regulatory barrier issues. Furthermore, national PV subsidy programs have been implemented by the MOF, the Ministry of Science and Technology (MoST) and the Ministry of Urban and Rural Development to promote the use of PV and rooftop systems with the second national PV subsidy package. Following this, a competitive bidding scheme has been also initiated for price determining in solar PV projects under the program.

To encourage Solar PV manufacturing industry, the government has following support through the MoST (Nagalakshmi Puttaswamy et al., 2015) such as: fund for innovation in small technology based firms, refund or exemption of land fee and tax (corporate income tax, VAT and interest on loans), electricity consumption fees, loan guarantee by the government, loan and credit facilities provided by the government or the state bank of China. Moreover, through The National Development and Reform Commission, the program targeted R&D development has been benefited from refund of import and VAT tax for R&D equipment.

According to Jiahua (2011) during the 11th Five-Year Period (2006–2010), the sector generated an average of 2,700 direct jobs and 6,500 indirect jobs annually and the estimation to an average of 6,680 direct jobs and 16,370 indirect jobs annually between 2011 to 2020; therefore green jobs could be much higher together the rapid growth in China's solar industry.

Although China has significant achievement in solar PV, photovoltaic manufacturing industry faces great uncertainties while, the global market and domestic demand have slowly developed; therefore, it is difficult to predict future prospects of this field.

In terms of wind power, wind power sector grew dramatically in China during the 11th Five-Year Period (2006–2010). In 2010, China became the leading market for wind energy in the World

(International Energy Agency, Energy Research Institute, Jiahua, 2011). To develop the wind power, stabilized cost-sharing mechanism has been established through a series of regulations, including bidding programs for wind farm investors, specific prices and feed-in tariffs, and binding management regulated in the Renewable Energy Law.

In the relationship between renewable energy development and job creation, the energy sector generates US\$17 billion and 1.5 million employments at the end of 2009 (Jiahua, 2011). It can be said that China provides an good example of energy policy towards job creation, income and revenue streams for low carbon industries.

Although wind power has expanded rapidly, sector has faced significant challenges, including grid access and integration, reliability of turbines and the development of offshore wind projects. Before 2020, wind farm development in China will be concentrated mainly in the northern regions where are far from loading centers and the electricity demand is low there (International Energy Agency, Energy Research Institute, IRENA, GWEC, nd.,2011). The rapid development of wind power has put a high pressure on the electricity grid infrastructure. Further more, the power grid system is still vertically managed, the same companies control all activities including transmission, distribution and power sales, so preventing diversity among market players. These are worth to consider in policy-making related to renewable energy development.

In terms of green transportation, green transportation has received more attention together with the construction of the low-carbon eco-city in order to mainly address environmental and social problems such as air pollution in Chinese cities (Jiahua, YE, 2011, 2014), reduce carbon emissions and save energy consumption (YE, 2014). During last years, the government of China has released a series of supportive policies to enhance the establishment of a green transportation system, including urban public transport and regulate the planning of a comprehensive transportation system; introduce green transportation campaigns for universal consensus, and demonstrate and apply new energy vehicles.

In sum, green transportation is an important part towards low-carbon eco-cities. The basic measures for green transportation development include constructing metro systems, roads, bus lanes, bicycle lanes, and pedestrian facilities are. However, current green transportation has revealed some weaknesses such as no specific targets for energy savings and carbon emission reductions as well as



lack green transportation vehicle from the demand and the evaluation of green transportation measures (YE, 2014).

The highlights of China's green economy development is the development of green thinking and the realization of the thinking in policy and practice based on a strong national financial system. This result directly contributes to the country's revenue, particularly through the export of renewable energy equipments and creates significant green employment in the future.

#### **4.3.2 Malaysia**

Malaysia has achieved certain achievements in green economy development those cover three dimensions of a green economy as well as reflecting the basic principles of green economy such as contributing to the economic growth towards green economy and green GDP, the green production (based on green technology) and the use of renewable energy in order to replace conventional energy sources in the future; promoting green agriculture, particularly towards organic rice production to increase the value of rice and improve the living conditions of farmers, especially the poor in the society; in conserving soil, water, bio diversity etc.

In the period of the tenth Malaysia plan, 2011-2015, the country set a target of reducing the GHG emission of its GDP by up to 40% compared to 2005 levels by 2020 and the country achieved a reduction at 33% by the end of 2013. Energy sector which is a major contributor to total GHGs emission of the country, has taken steps to increase the use of clean and environmentally friendly sources. Since the renewable energy Act was introduced in 2011, then the implementing the FiT mechanism, the growth of renewable energy increased from 53 megawatts (MW) in 2009 to 243 MW in 2014. In term of climate change adaption and mitigation, about a million people have been protected from the serious impact of floods; 23,264 hectares of forest has been protected as permanent reserved forest through implementing 194 projects of flood mitigation. This contributes to the maintenance of natural assets in Malaysia (Pursuing green growth for sustainability and resilience, 2015).

In term of poverty alleviation, Malaysia has achieved certain results in fostering the development of green agriculture in order to improve the living standard for farmers, contribute to poverty alleviation, reduce social inequity, and ensure rice security in the context of emerging food security and contribute to the conservation of bio diversity. Rice is the key food of Malaysia, so identifying agriculture sector towards greening as an approach will directly address challenges from all three

components of green economy in Malaysia. Greening the agricultural sector is expected to ensure food and reduce poverty as well as enhancing well-being in rural areas in Malaysia through maintaining natural capital stock. This is examined by an example of System of Rice Intensification (SRI) in Malaysia. SRI is a significant innovation in organic farm so as to improve the quality of land, water, labour and capital investment in rice cultivation such as 25-50% water saving, 80-90% seeds, 10-20% cost reducing, 25-100% increasing crop yields. In 2006, Malaysia first applied SRI and then has expanded to use within the country. The impact of SRI was examined by a study in Johore, Kampung Kesang Tasek, Ledang in Malaysia and indicated that SRI increases of rice plants, as well as indicators related to plant height, cereal grain and especially rice yields of up to 7.58 tonnes/ha as well as improve soil quality, biodiversity in the land (Febri Doni et la., 2005)

In addition, a series of related activities and projects within the SRI have been shown on the website <http://sri.cals.cornell.edu/countries/malaysia/index.html> that the application of SRI has attracted the interest of non-governmental organizations and scientists in rice field and the participation of farmers. The study also stated the SRI as a useful method to implement green agriculture development. Through improvement of rice productivity, the price of rice has been also increased, bring more income for farmers, so that contributes to poverty reduction. Moreover, biological measures help farmers reduce the use of fertilizers, so it helps to preserve the environment, soil and water quality towards a sustainable developing manner.

In term of energy accession, Malaysia has determined the transition in renewable energy as a requirement to promote socio-economic development, improve the living standards, contribute to environmental protection and climate change mitigation, especially for the remote areas in the country, mainly in Sabah and Sarawak. Vaghefi Negin et la. (2015) indicated that enabling to renewable energy accession in rural areas in Malaysia can contribute significantly to poverty alleviation and social welfare for the poor in term of improvement of health care, education, water supplying services, agricultural sector and employment. Applying renewable energy in Bario Asal village, in North East Sarawak, remote rural areas in Malaysia can be seen as a successful model. Renewable power accession has reduced the dependence of conventional power that generated by diesel fuel. Renewable sources has become the main power for some households in the village.

In term of job creation, the government of Malaysia has forecasted a number of 451,704 jobs by 2025 mainly from sectors of energy, building, water and water management, transportation, ICT

and manufacturing compared to 95,000 green jobs in 2013. The potential sectors have been determined including energy, renewable energy, energy efficiency in construction and building, recycling sector, agricultural sector and transportation, environment services (eco-consultant, eco-energy, environment educator). According to the estimation of experts, a number of 52,000 job will be created in construction and renewable energy plants by 2020 in Malaysia. The study also indicated that the achievement of green jobs can realize with effective measures such as incentives for specific industry relevant to green production and skill training for employees. Furthermore, green business was expected to 8% contributing to GDP by 2015 compared to 2% of GDP in 2013 in Malaysia through green technology target.

In generally, similar to China, Malaysia is a nation that has an early awareness of environmental protection and towards green economy, while using national financial resources as a major support for the transition to green economy and defining green technology as the basic framework for green production and economic growth. However, it can be said that the green economy scale reflected in the size of green sectors and the number of green jobs in Malaysia is smaller than China, especially in the field of renewable energy sector. In terms of using policy measures to promote green economy, Malaysia's support measures are less diversified than China, mainly are the FiT mechanism and some other incentives.

A specific analysis of green economy policy in case studies, China and Malaysia with particular focus on their achievements insignificant meaning in comparing and giving policy recommendations for green economy policy in Vietnam in chapter 6.

## CHAPTER 5

### FINDINGS OF GREEN ECONOMY IN VIETNAM

#### 5.1 Results of SWOT analysis

This analysis is applied to clarify the strengths and weaknesses of Vietnam as internal factors and opportunities and threats as external factors affecting the transition to a green economy in Vietnam. Data is collected from documents and in-depth interviews has been applied in SWOT analysis to answer the questions that determined in Chapter 3 of each aspect of Vietnam in the SWOT analysis. The following results of the SWOT analysis are briefly shown in the table 3 below as well as in the details:

**Table 3: Summary of SWOT analysis of green economy transition in Vietnam**

<p><b><i>Strengths</i></b></p> <ul style="list-style-type: none"> <li>• Abundant natural capital</li> <li>• Progressive socio-economic reform</li> <li>• Stable political environment and society</li> <li>• Abundant labor force</li> <li>• Potential agriculture, forestry and fishery</li> </ul>	<p><b><i>Weakness</i></b></p> <ul style="list-style-type: none"> <li>• Limited awareness of green economy</li> <li>• Lack of policy measures</li> <li>• Consistent legal system and policies</li> <li>• Large share of "brown" economy</li> <li>• Huge capital investment required</li> </ul>
<p><b><i>Opportunities</i></b></p> <ul style="list-style-type: none"> <li>• Opportunity of transforming growth model</li> <li>• International support</li> <li>• Advanced technology transfer</li> </ul>	<p><b><i>Threats</i></b></p> <ul style="list-style-type: none"> <li>• Need to further study</li> <li>• Most severely affected by climate change</li> <li>• Limited domestic resources</li> </ul>

##### 5.1.1 Strengths

*First*, Vietnam has comparative advantages in terms of natural conditions and natural resources. Vietnam locates in the tropical region of Southeast Asian, with potentials of solar energy, wind energy and fast-growing organisms, which are opportunities for Vietnam to achieve the Millennium

Development Goals (MDGs) towards green economy. The unchanged role of the Northern Highlands and the Truong Son mountain for securing water resource, providing shelter and maintaining indigenous culture, and controlling natural disasters such as flood, landslides and depositing land in the Global Green New Deal (Tram, 2015), which is an advantage of ecosystem services that can be estimated, and its real value as a basic part of Vietnam's natural capital. So, Vietnam has a lot of potential to develop green sectors such as agriculture, renewable energy and tourism etc.

*Second*, Vietnam's socio-economic development has comprehensively reformed after 30 years of innovation and opening up the economy. Moreover, the national economy has continuously grown in recent years, creating an internal force for a new development trend; favorable legal environment, mechanisms and policies towards promoting "restructuring the economy associated with the new growth model" as a key task in the socio-economic development strategy. Furthermore, the labor force of Vietnam is in the period of "golden population" (Giang Thanh Long, Bui The Cuong, nd.), with the tradition of hard working, simple living and harmony with the nature influencing of the Eastern cultural tradition and obtaining quickly science – technology and management skills to develop green human resource.

*Third*, the challenges of environmental problems, pollution and resource depletion have awakened leaders and people to support for the new development model, green economy, remove the "brown" economy. Viet Nam has been successful in achieving some Millennium Development Goals, particular in the goal of poverty reduction (UNICEF, 2010). Moreover, Vietnam is improving the institution of the socialist-oriented market economy, towards a development for human being. These factors are put in a stable political environment, expanding international relations and intensively international integration which bring a good opportunity for the implementation of green economy policy.

*Fourth*, towards a green economy will receive a high consensus of society for the following reasons: (i) The environmental pollution and resource depletion during the recent time have affected to the development of the country; (ii) Many sectors in the Vietnam's economy such as energy, water, industry, infrastructure, construction and urban, transport, etc. have shown limitations forcing the government to restructure these sectors; (iii) After a period of development since the innovation and opening, people have been aware of the cost of the "brown" economy model.

*Fifth*, In the case of food crisis, Vietnam has the potential to become a key country in the chain of food security for the World. This can be called "green power" of Vietnam in the future, building on the foundation of a modern economy with the high advantages in exporting products of agriculture, forestry and fishery in the World (Tram, 2015).

### **5.1.2 Weaknesses**

*First*, the perception of what is a green economy is still very new and unconfirmed in government agencies, enterprises and communities in Vietnam. It requires studying and disseminating the concept of green economy more popularly. Furthermore, the process of moving from awareness to action, from the conventional habits, not friendly and harmonious with the nature of production and consumption to green ones also requires a certain period of time to adapt. Up to now, there is not any legal documents and policies specifically mentioned the definition of green economy in Vietnam.

*Second*, Vietnam lacks policy measures to encourage enterprises and social community to involve in the transition to green economy, in which financial policy instruments supporting green economy have not been fully formed. The green tax system has not been fully implemented, the system of standards for green products, energy use in each sector have not been issued. Moreover, incentive policies for green and environmentally friendly investment projects have not been effectively implemented.

*Third*, the legal system and policies of Vietnam are not consistent with the green economy perspective. For example, the government determines to promote green economy but the subsidy for fossil fuel-based production and consumption still accounts for a quite large amount. According to the International Energy Agency (IEA), the subsidy for fossil fuel in Vietnam for the period 2007-2011 was around 3% of GDP (3.4% of GDP in 2011), higher than other countries, such as India (2.4%), Malaysia (2.6%) and Indonesia (2.5%) (Vu, 2015), so foreign investors who operate in clean energy sector have not invested more in Vietnam.

*Fourth*, green economy is associated with the use of renewable energy, low carbon, and investment in restoring ecosystems, livelihoods associated with environmental restoration while the technology of production in Vietnam is mostly old technology and consumes a large amount of energy, and the share of "brown" economy is a big contribution to the economy; environmental services, recycling

industry are still weak. Therefore, the innovation of technology towards the green economy is a significant challenge.

*Fifth*, mobilizing capital for the implementation of green economy is still difficult. Although, Vietnam has escaped from the threshold of poor countries, the national accumulation compared to developed countries is very low while according to Ministry of Planning and Investment, Vietnam needs 30 million USD to realize the Vietnam Green Growth Strategy (MPI, 2014).

### **5.1.3 Opportunities**

*First*, like other developing economies, green economy is an opportunity for Vietnam to transform into a new growth model that is friendly to the environment and promoting social equity. Furthermore, the difficulties and challenges of the economy in recent years are putting Vietnam in a high pressure of reforming and restructuring the economy and transforming the growth model towards efficiency and more sustainability.

*Second*, green economy or green growth is the trend of development in the World and the issues relating to climate change have received a great attention of the international community. Considering the green economy model, Vietnam can learn from the international experience and actively participate in international and regional agreements relating to green economy and sustainable development as well as the support and assistance of international organizations in the World to develop green growth and green investment policies as well as institutional reforms associated with green economy policies. It facilitate stakeholders including the state, enterprises and R&D organizations to coordinate.

*Third*, Vietnamese enterprises will benefit from international institutions that have been formed through international initiatives to promote green growth/green economy to receive technology transfer and business cooperation. In the field of FDI attraction, with more appropriate policies, foreign investors will promote high technology investment, contributing to improve the situation of science and technology and connecting with global green production network.

### **5.1.4 Threats**

*First*, Vietnam is considered as one of the few countries that is most severely affected by climate change and vulnerability due to disaster increase, the country is the seventh most damaging country

worldwide caused by climate change (Huong, 2015; Truong Quang Hoc, Hoang Van Thang, 2014,).

*Second*, green economy still needs to further study by the international community and experts around the World, so the policy mechanism of green economy in Vietnam needs to complete. It is imperative to review the relevant policy mechanism and adjust it to suit the new development model towards green economy.

*Third*, green economy requires a considerable amount of financial resource to invest in technology improvements and green investment projects, while domestic resources are limited. Therefore, the implementation of green growth strategy can not be based only on limited state budget, but must mobilize capital from the banking system, private sector, especially foreign investment with the support of international organizations.

It can be seen that the strengths and weaknesses of Vietnam as well as the opportunities and threats are the same in terms of quantity, opportunities and challenges intertwines. Identifying each aspect, both internal and external factors will help to make green economy policy more feasibly and reality by capturing opportunities, realizing strengths and weaknesses of pursuing a green economy in Vietnam. The SWOT analysis will directly contribute to policy recommendations for Vietnam in the following sections.

## **5.2 Implementation of green economy policy in Vietnam**

Through the study of documents including guidelines and resolutions of the Party, policies and legal documents of the Government of Vietnam such as socio-economic development plans, national development strategies, reports of ministries relating to green economy, green growth and other documents and data obtained from experts in in-depth interviews show that Vietnam has realized the importance of green economy development since the early 1990s of the twentieth century. The highlight of the Government's green economy policy is the enactment of the Vietnam Green Growth Strategy for the period 2011-2020 and the vision to 2050. The strategy covers all objectives and main tasks of Viet Nam towards a green economy, in which the Ministry of Planning and Investment is the host for coordinating the implementation of the strategy. Therefore, examining the implementation of this strategy is significant to clarify the achievements as well as the limitations of green economy policy in the process towards green economy in Vietnam.



### **5.2.1 Achievements**

Since the Vietnam Green Growth Strategy introduced in 2012 and then the National Green Growth Action Plan in 2014, Vietnam has implemented the national action plan on green growth nationwide.

*First*, in terms of institutional and organizational strengthening, the government is considering the establishment of the Inter-sectorial Coordinating Committee on green growth under the National Committee for Climate change heading by the Deputy Prime Minister and the Minister of the MPI as Standing Vice-Chairman, with the representatives of ministries as members. The task of the Committee is to assist the Prime Minister as the Chairman of the National Committee on Climate change to coordinate ministries, sectors and localities in implementing the VGGS, allocating VGGS and action plan.

The establishment of the Committee with senior members of the government and representatives of ministries and sectors shows that the Government of Vietnam has paid great attention to the development of green economy from the central to the local level.

*Second*, in terms of policy reform and mechanism of green economy, the MPI has reviewed the investment policy framework and coordinated with the Ministry of Finance (MOF) to evaluate the fiscal policy instruments, identify the issues that need to support, suggest policy reforms that support the transition process of green economy. The MOF has also implemented the project "Maintaining and Promoting green fiscal policy reforms and ecology" to support eco-friendly financing reforms. The MPI has also coordinated with the Ministry of Transport to review investment incentives for energy efficiency transportation networks, remove green growth barriers; build green growth investment guidelines to integrate green growth into the socio-economic development planning process; build the green investment guidelines and issue the priority framework for climate change adaptation, these are two important tools to help policymakers and government identify and prioritize projects of environmental protection, responding to climate change and green growth.

Reviewing and adjusting policies relating to green growth is important in the successful transition to a green economy, especially policies related to green finance and investment. This is also pointed out by UNEP (2010) in the success of developing countries.

*Third*, establishing action plans on green growth for ministries and local governments, relevant ministries (Ministry of Industry and Trade, Ministry of Agriculture and Rural Development, Ministry of Construction, Ministry of Transport, Ministry of Finance, Ministry of Natural resources and Environment) and 32 provinces, accounting for more than 50% of the provinces in the country, have developed action plans in the areas of ministry, and local level based on the socio-economic situation and natural conditions, in which the initial focus is on assessing the current situation, identifying key sectors, potentials, priority options, proposing mechanisms of mobilizing sources for investing in green growth with the participation of the private sector etc.

*Fourth*, the government, ministries and localities have made efforts to allocate stably resources for climate change and green growth while the revenue is limited. According to the Climate Public Expenditure and Institutional Review (CPEIR), the government budget for climate change in Vietnam contributing to total resources accounts for 69%. Investments in climate change and green growth projects (approximately 1 billion USD per year) such as energy efficiency, afforestation and for projects of research and capacity building; and about 11 billion USD from ODA since 1993 as well as other sources include: REDD+, Vietnam Environment Protection Fund, CDM; private sources: FDI, securities, etc.

*Fifth*, in term of attracting resources for green growth, the Climate Finance Working Group was established to coordinate with the World Bank and the UNDP to conduct the CPEIR, and with other donors assessing the providing ODA to 66 actions of the Vietnam Green Growth Strategy in order to identify the need of resources and priorities in the use of ODA; at the same time, coordinating with ministries, and localities to mobilize finance from donors and international organizations to carry out green growth activities and pilot activities in some localities through technical assistance projects; implementing the project to set up green growth support fund. As a result, it has mobilized 5 million euros from the Government of Belgium; 2 million USD from the Government of Korea and 3.6 million USD from the UNDP, 2 million USD from USAID for institutional activities on green growth, etc. In addition, the Green Climate Fund (GCF) in Vietnam is actively studying the mechanism for mobilizing financial resources for green growth and climate change, in collaboration with donors to assess capacity, building conditions for human capital and structure to enhance directly and indirectly access to international resources for green growth and climate change. In June 2016, GCF announced funding of 29.5 million USD (one of the first three countries in Asia can access). This is a positive sign of the Vietnamese Government in mobilizing new resources and

more increase for climate change through the financial mechanism of the United Nations Framework Convention on Climate Change. In addition, the MPI is now actively coordinating with the Vietnam Development Bank (VDB) with the support of the UNDP and the GIZ to become a National Executing Agency approved by GCF in order to enhancing the access of Vietnam to the resources of GCF (Pham Hoang Mai, Nguyen Thi Dieu Trinh, 2016).

Attracting resources for green economy in Vietnam, especially financial resources will directly contribute to addressing one of Vietnam's major challenges as a capital investment for green growth, particularly foreign capital while domestic accumulation is low. In addition, important projects of technical assistance such as the National Targeted Program on green growth, the coordination between the MPI and the International Cooperation Agency, Korea (KOICA) to study legal framework for the implementation of VGGS, focus on four key sectors - industry, energy, planning and investment, and the environment.

*Sixth*, in term of green production and consumption, Vietnam is also actively participating in regional initiatives on green production and consumption, such as the project "Promoting consumption and participation in green production through sustainable public procurement and eco-labeling" financed by the UNEP and hosted by the Ministry of Natural Resources and the Environment. "Vietnam Cleaner Production Center" was also established by the United Nations Industrial Development Organization (UNIDO). Accordingly, the project has widely disseminated the concept of cleaner production and promoted the application of pollution prevention in industrial enterprises in Vietnam. The Cleaner Production Center of Vietnam has successfully implemented Cleaner Production Assessment in more than 300 enterprises in various sectors (Ngoan, 2016). The other project is implemented by the cooperation between the MPI and the UNIDO, "Implementing eco-industrial park initiative towards sustainable eco-industrial park in Vietnam". The goal is to transform the industrial park model towards the ecological industrial park, environmentally sustainable and the sustainable use of resources and energy, promoting the transfer, application and dissemination of cleaner production technologies and practice to minimize hazardous waste, GHG emissions as well as water pollution and good chemical management in the industrial parks. In the agricultural sector, supportive projects of low carbon agriculture in provinces around the country have implemented by the Ministry of Agriculture and Rural Development with the support of the Asian Development Bank (ADB) aimed at building a sustainable, efficient and environmentally friendly agriculture through the building and replication of research and transfer models of agricultural production technologies to reduce GHG emissions, minimize the impact of climate

change, efficient use of natural resources, waste by-products in agriculture, etc. improving livelihoods and the quality of life of farmers.

In addition to the programs and projects sponsored by foreign countries, many ministries and agencies have implemented programs aimed at green consumption such as the program of energy labeling for energy-consuming equipment and devices by the Ministry of Industry and Trade in 2012, the eco-labeling program implemented by the Ministry of Natural Resources and Environment in 2010 to identify Vietnam Green Label for 3 products as detergent, fluorescent lamp optical and biodegradable plastic packaging used to pack goods when shopping, followed by Green Label for many electronic products, household appliances in the period 2012-2015. Eco-labeling is being piloted and voluntary for enterprises with no cost.

To encourage green procurement, Vietnam has taken the first steps in accessing green product market in production and consumption. Many companies in Vietnam have plans to produce green products such as Sony Electronics Vietnam, Vietnam milk Company (Vinamilk), Dien Quang Lamp Joint Stock Company, Viglacera Corporation etc. Thus, it is possible to see that Vietnam has implemented green production programs and projects in many different sectors in the economy, focusing on identifying potential sectors and significant impact on the green production and consumption targets set by the VGGS (energy, transportation, environment, etc.) and agricultural sector. The mobilization of technical and financial resources was initially well implemented with the support and commitment of many international organizations.

*Seventh*, the share of economic sectors and green jobs, measurement of green jobs in all green activities in Vietnam is very difficult because Vietnam has not had any separate surveys on greening, as well as survey tools that can handle data on greening as defined by the ILO and the UNEP (Nguyen Ba Ngoc, 2014). The study by Nguyen Ba Ngoc (2014) focused on analyzing green jobs in green products and services that are processed from the enterprise data sets in 2010 and 2012 by the General Statistical Organization for the total value of services produced by green sectors accounted for a minor share in the total value of goods and services of the whole economy with about 0.6% (2010) and 1.97% (2012), in which solid waste, liquid waste and forestry were the highest production value in the green sectors. Total employment in green sectors also accounted for a modest proportion of about 1.2%, with solid and liquid waste accounting for the highest proportion of workers, with 0.54% in 2010 and 1.01% (2012).

In the green sectors, sectors with a high proportion of the value of goods and services produced are forestry, water filtering and clean water distributing, solid and liquid waste treatment and botanical garden, zoo, the value of forestry production accounted for nearly one half of the total value of goods and services produced by sectors towards environmental protection. In terms of labor scale, in 2012 the solid waste and liquidation industry were the leading in terms of labor size with 49.58%, followed by the botanical zoo (21.07%), and the office clean sector (13.49%) (Nguyen Ba Ngoc, 2014).

**Table 4: Share of green industries and employment rate**

Sector of environmental protection	2010		Within the green sector		2012		Within the green sector	
	In economy Value of production/services (%)	Labor (%)	Value of production/services (%)	Labor (%)	In economy Value of production/services (%)	Labor (%)	Value of production/services (%)	Labor (%)
1. Forestry and forestry service activities	0.29	0.04	48.46	3.49	0.13	0.02	6.75	1.45
2. Exploiting, filtering and distributing clean water	0.16	0.44	27.39	36.14	0.12	0.00	5.95	15.57
3. Activities to study environmental protection	0.01	0.02	1.34	1.5	0.05	0.07	2.52	4.00
4. Office cleaning activities against pollution	0.02	0.12	2.67	9.79	0.27	0.25	13.49	14.46
5. Administrative management of environmental protection	0	0.01	0.16	0.53	0.00	0.00	0.02	0.19
6. Activities of the botanical garden, zoo	0.01	0.04	0.9	3.4	0.41	0.07	21.07	3.83
7. Solid and liquid waste treatment	0.11	0.54	18.77	44.57	0.98	1.01	49.58	59.08
8. Gas treatment	0	0	0.15	0.23	0.00	0.00	0.04	0.22
9. Noise treatment	0	0	0	0	0.00	0.00	0.01	0.00
10. Environmental problems, contaminated water or other wastes treatment	0	0	0.17	0.34	0.01	0.02	0.55	1.20
<b>Total</b>	<b>0.6</b>	<b>1.2</b>	<b>100</b>	<b>100</b>	<b>1.97</b>	<b>1.20</b>	-	-

Source: Nguyen Ba Ngoc, 2014

With the above achievements, it can be seen that, the impacts of green economy policy have been quite limited after 5 years since the VGGS was issued. These results, however, are also important in establishing the foundation for a transition to a green economy, with the high efforts and determination of the Vietnamese government and ministries, localities as well as the people in pursuing green economy for the period 2020 and the vision to 2050.

### **5.2.2 Limitations**

Despite the above results, Vietnam still has many limitations and challenges in implementing green economy policy. The main issues can be summarized as follows:

At present, the MPI is assigned to prepare the five-year report of implementing the VGGS, and in order to comparing the achievements with the targets in the VGGS, the MPI needs to synthesize data from ministries, sectors and localities and the report is going to be launched by the end of 2017. The report will provide important data for assessing the implementation of the VGGS as well as the implementation of green economy in general in Vietnam. However, from the analysis of the study it can be seen that although the Vietnamese government has paid attention in making and issuing policies relating to green economy since the introduction of the VGGS in 2012, there are many limitations and challenges to consider as follows:

*First*, the perception of ministries, sectors and local government of green economy has been quite limited and it is unified point of view. This has been reflected in the issuance of action plan by ministries, sectors and local governments. So far, only 5/22 ministries and 30/63 provinces have issued an action plan to implement the VGGS. This proves that the implementation of the VGGS has not yet become an urgent task that needs to be seriously addressed by most ministries, sectors and localities.

*Second*, the lack of policy instruments to transform from brown to green economy. Although, the government has issued a series of policies relevant to green economy, it is lack of policy instruments such as attractive investment policies to mobilize financial resources, so the transition into green economy has not been as expectation.

*Third*, the green growth targets have not integrated into the content of economic restructuring and local socio-economic development plans. The objectives of green growth should be reflected in the content of economy restructuring, and in the local socio-economic development plans. However,

through document analysis, in-depth interviews show that the integration of green growth targets into local socio-economic development plans has faced lots of difficulties in practice.

*Fourth*, it is lack of resources to carrying out the transition to green economy. Green economy requires huge investment capital and other resources such as skilled labor, advanced technology, energy efficiency etc. However, financial resource for green economy in Vietnam now relies mainly on foreign funds; other resources such as human resource, science and technology, etc. are limited. The table below shows the total cost which is to 30.729,56 million USD for the target of emission reduction in Vietnam to 2020.

**Table 5: The demand for green growth in Vietnam by 2020**

<b>Sector/sub-sector</b>	<b>Cost of emission reduction (million USD)</b>	<b>ERs (MtCO<sub>2</sub>)</b>	<b>Average MAC (USD-ton CO<sub>2</sub>)</b>
Construction	3.33	0.17	-69.46
Building materials	17.54	0.49	-14.39
Cement	725,00	2.61	-45.27
Family	2,279,19	16.54	-32.32
Paper sector	0.00	0.19	-93.46
Power generation	27,625,00	61.37	16.11
Steel sector	79.50	0.22	-44.60
<b>Total</b>	<b>30,729,56</b>	<b>85.12</b>	<b>-36.10</b>

*Source: MPI, GIZ, 2017*

*Fifth*, it is conflicting, overlapping objectives between strategies including Sustainable Development Strategy, National Strategy for Resilience to Climate Change, VGGS etc., so local governments are confused and do not how to implement them at the same time.

In sum, the identification of these constraints helps identifying of directions and solutions as well as policy implications within the study in order to fostering green economy policy, especially the VGGS by 2020 and the vision to 2050



# CHAPTER 6

## CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Discussions

#### 6.1.1 Definition of green economy

Although there are different definitions and there is no agreed international definition of green economy, as well as the term in each country is different, it can be concluded that green economy is the economy of low carbon development, includes the efficient and sustainable use of resources, the maintenance of biodiversity and the restoration of ecosystems to improve the living conditions of people in the present generation as well as for the future generations.

For developing countries, green economy should play a significant role in addressing the serious challenges to these economies, including reducing poverty and social inequity; minimizing the impact of damaging the environment and ecosystems; help them adapt and mitigate the impacts of climate change and natural disasters through the consideration of changing the economic growth model, reallocating public investment, developing green sectors, especially the renewable energy sector.

In Vietnam, the concept of green economy though it is not quite new, it should be considered and more clearly mentioned, especially in the action plan for implementing the VGGs as well as other green policies. This will directly contribute to raising awareness, and the role of green economy not only within the community but also at the local governments and even the central agencies.

#### 6.1.2 Green economy in developing countries

##### *(i) Characteristics of green economy*

Through analysis, some characteristics of green economy in developing countries are given below: The awareness of green economy in developing countries is still limited but it is gradually raised, especially many developing countries such as China, Malaysia and Vietnam have considered it as an opportunity for changing the economic growth model or socio-economic development.

Furthermore, green economy policy in developing countries has received a great deal of attention from the international community. Many countries have approached and received positive financial and technical support of the international donor community and organizations such as the UNEP, the UNDP, the WB or the OECD etc.

It includes the determination of potential sectors for green economy, such as renewable energy, agriculture, forestry and so on. For example, China has affirmed its leading position in the global market in manufacturing solar energy equipment as PV; it is organic agriculture in Uganda or forestry sector in Nepal. Moreover, there are many potential sectors such as transportation, green cities and urbans, green technology in China, Brazil, India, Malaysia, etc. As a result, green jobs are created, contributing to economic growth and reduce environmental pollution, adapt and mitigate the effects of climate change, those developing countries are seriously facing.

In the regard of financial support, some countries with economic potentials such as China has established the green financial system with the involvement of key stakeholders including the people's Bank of China, the MOF and other ones. This has ensured stable financial support for the transition of green economy but most other developing countries have intensively relied on financial support from the international community, so the sustainability of green economy projects should be considered in the long term, for instance the projects and programs in the African countries.

The transition to green economy requires governments to adopt a mix of policy instrutmens to encourage and promote green economy, but most developing countries lack policy measures, incentives to promote the transition to green economy, especially policy measures to promote the involvement of private sector in the transition of green economy.

The measurement of green economy through green economy indicators, such as the set of indicators of the OECD, or the determination of green GDP indicator is in the process of studying in most developing countries.

The results of green economy transition in developing countries have been unclear due to the major reasons related to financial resources, human resources, technology and innovation and awareness.

*(ii) The role of green economy*

Contrasting with the the role of green economy for developing countries in terms of theory mentioned in the Chapter 2 Literature review, the key findings are determined as follows:

*First*, it is considered as a model of new economic growth for developing countries. This is realized by most developing countries, but in practice, the results of the transition to a green economy that have directly contributed to the objective of economic growth in developing countries are not significant as the expectation. This does not mean that the role of green economy is not promoted, but it should be examined in the long term, especially the effects of green economy will not been significantly shown in the short term. Furthermore, it is the requirement of well-designed policy and the best implementations in the practice.

*Second*, with the role of ensuring natural assets, providing inputs to goods and ecosystem services as well as creating green jobs, the initial results of green economy in developing countries, including new jobs creation related to ecosystem, environment, renewable energy and so on are somewhat reflected this.

*Third*, in terms of addressing poverty reduction and enhancing social equity, green economy policy of developing countries has mentioned the goals towards the poor and the vulnerable group. In fact, some specific examples of improving the living conditions of the poor by removing fossil fuel subsidies so that money can be turned to supply public transport or health care services; a new source of income from forest products and agricultural production through sustainable certification schemes and eco-labelling programmes etc. in Uganda, Nepal, China and so on have been recognized. Moreover, the programmes of climate change adaptaion and mitigation have been implemented in Vietnam, Malaysia and other developing countries that directly supported the poor and vulnerable groups.

*Fourth*, in terms of energy supply and energy security, the policy of renewable energy initiative has positive impacts in the practice in most developing countries, typically as China, one of the leading countries in PV manufacture (for solar energy) and the products exported around the World, Malaysia in improving the accession to energy for the poor in rural area, or in Kenya, Tunisia etc. Clean energy or renewable energy in developing economies including wind, solar, biomass energies etc has generated in order to diversifying energy sources and reduce energy consumption from fossil fuels as well as directly contribute to national energy security.

It can be said that the important achievements of green economy are in the long term, but it can not be denied the role of green economy model with developing countries in the context of financial crisis, global economic recession, energy and food insecurity, environment and natural disasters in promoting human well-being, reducing poverty, adapting and mitigating climate change and environment risks. In sum, green economy is the way to achieve sustainable development goals.

### **6.1.3 Green economy in Vietnam**

In general, green economy in Vietnam has reflected most of the characteristics of green economy in the developing countries above, but there are some notable differences as follows:

*Firstly*, the awareness and promulgation of policies and legal documents relating to sustainable development, environmental protection and green economy in Vietnam was significantly slower than the countries as China and Malaysia. At the Seventh Party Congress in 1991, Vietnam adopted the Socio-Economic Development Strategy for the period 1991-2000. The idea of developing a sustainable economy was emphasized that economic growth must be associated with progress and equality society, cultural development, environmental protection. Vietnam then introduced the Agenda 21 in 2004, while China and Malaysia have early paid attention in environmental protection since the period 1970s to the 1980s and released the Agenda 21 in the 1990s. The time gap is more or less that influences the development of awareness and thinking about green economy in Vietnam compared to these two countries.

*Secondly*, Vietnam used the term "green growth" in the Vietnam Green Growth Strategy for the period 2011-2020 and the vision to 2050. However, the definition of green growth has not been explicitly mentioned in the strategy as well as other documents and policies relating to green economy, while the countries such as China and Malaysia do not have an unified term that implies green economy. For example, China use various terms at the same time such as circular economy, green development or ecological civilization.

*Thirdly*, the promulgation of the VGGGS has been seen as the footprint of Vietnam towards greening the economy, focused on three main objectives, including reducing greenhouse gas emissions, greening production and consumption, while very few developing countries have introduced a national strategy of green economy or green growth but more determined green sector policies. Therefore, the emerging question is whether the promulgation of the VGGGS decides the success of the transition to a green economy? Data analysis and the case studies show that the releasing a

national green economy strategy is not enough to lead to the success of the transition. The successful transition requires well-designed policy and the best implementation in practice. Although there has not got a national strategy for green economy such as Vietnam, China and Malaysia have remarkable achievements in the realization green sectors policies in practice. Meanwhile, the capacity to implement green economy policy in Vietnam is still limited, especially at the local government levels.

*Fourthly*, Vietnam has not significantly taken the advantages as expectation and determined in the SWOT analysis on natural conditions, labor forces in the golden population period, etc. to develop green economy, especially in the potential sectors such as renewable energy (wind and solar energy) and agriculture, the traditional economic sector of Vietnam while Vietnam is still facing the increasing demand for energy consumption from fossil fuels.

*Fifthly*, the State-owned enterprises are identified as the leading role in Vietnam's economy, but the technology is outdated and their operating efficiency is not high. Furthermore, they are highly supported by the government; therefore the motivation of transition to green economy is weak and impacts on the goals of green production that the VGGS has mentioned as the key task.

## **6.2 Policy recommendations for Vietnam**

From the above analysis, it is possible to consider some policy recommendations to promote the realization of green economy policy in general and the VGGS as follows:

*First of all*, it is necessary to raise awareness of green economy not only for the public but also for the senior leaders in the ministries and the local governments in various forms such as disseminating, training, conferences or organizing contests, etc thereby promoting their active participation in the implementing green economy policy including the issuance of green growth action plan of ministries and local governments that Vietnam has set.

*Secondly*, it needs to improve the institutions and policies to promote green economy by reviewing and assessing policies on sectoral and regional development and, especially the socio-economic development strategy by 2020 and the version to 2030; integrate the contents of the VGGS into the strategy, plan that suits the new context and future trend. Lessons from Malaysia show that the goal

of national green technology policy is incorporated into the socio-economic development plan and as a driver for national competitiveness.

*Thirdly*, the lesson learnt from Malaysia also shows that it is considered to accelerate economic restructuring, reform economic growth model, reform state-owned enterprises towards green growth, green economy and sustainable development.

*Fourthly*, it should consider the priority sectors and localities to pilot green policy. Lessons from China and Malaysia or Kenya show that identifying the potential sector towards green growth will have positive impacts on the transition to green economy. In Vietnam, sectors such as agriculture, energy, transport, construction, natural resources and the environment can be considered and some provinces play an important role in regional economic development such as Quang Nam, Hai Phong, Thai Nguyen and Quang Ninh. The implementation should depend on the conditions and circumstances of each sector and province.

*Fifthly*, it needs to early establish and issue the national set of indicators for green economy monitoring and measurement. This set of indicators should be consistent with international indicators, reference the OECD's set of indicators and the United Nations Council for Sustainable Development (UNCSD), but must be linked to the practice in Viet Nam. Moreover, it needs to examine for building the framework of green GDP measurement.

*Sixthly*, there should be a policy of close cooperation with international organizations and countries around the World in sharing experiences, exchanging experts, cooperating in research, technological innovation and attracting capital investment in green economy.

*Seventhly*, it needs to continue to establish and improve the green financial system with consistent mechanism and policies to foster the development of green credit in order to directly and effectively support the transition to green economy; form capital markets for businesses, projects and green products through listing, issuing green stocks, green bonds, investment certificates etc. for green projects, programs and sectors. The experience of Malaysia and China shows the formation of a strong national financial system, with the involvement of key financial stakeholders such as the State Bank, the MOF, the Securities Commission, and insurance is possible to meet the demand of sustainable green financing for greening transition.

*Eighthly*, it requires to improve the policy, mechanisms to encourage the involvement of private sector in investing, accessing modern clean technology in the World and efficiently using of energy as well as attracting other stakeholders in order to foster greening production towards sustainable development. In this aspect, China and Malaysia have significant results in applying various policy measures and call private sector for involvement and investment.

## **6.3 Evaluation of the study and future research**

### **6.3.1 Strengths of the study**

Green economy or sustainable development or green energy economy is usually associated with developed economies, but it is emerging in developing countries. Although the study of green economy, especially green economy policy in developing countries is not very new, it has significant meaning in the context of global socio-economic development that has significantly impacts and poses challenges for developing economies today. Green economy is not only a new trend, but it is also an optimal choice for developing and emerging economies. Therefore, the study of green economy, especially green economy policy in developing countries and focusing on green economy in Vietnam are interesting not only in theory but also in practice.

In terms of theory, the study has contributed to clarify the concept of green economy, distinguish between the concept of green economy and related concepts such as green growth, sustainable development and low carbon development. For Vietnam, the study has also contributed to clarifying the concept of green economy and considered it as the way to achieve the goals of sustainable development. In addition, the study has also identified characteristics of green economy in developing countries and examined the role of green economy in the context of considering a new socio-economic development model and emerging challenges relating to environment and ecosystem that are facing developing countries.

In terms of practice, green economy in general and the VGGS for the period 2011-2020 and the vision to 2050 in particular are particularly concerned by the Party and the State of Vietnam. The study has provided an overview of the development of green economy in Vietnam; shown the achievements, limitations and given valuable policy implications based on the experience of developing countries, including China and Malaysia with good policies and achievements in the transition to green economy.

This study has been conducted in the context of the MPI, the coordinating agency for the implementation of the VGGS, in collaboration with other ministries, and local governments to assess the five-year implementation of the VGGS to report to the Prime Minister in order to finding the solutions for green economy development by 2020 and the version to 2050; therefore the study will certainly be a valuable reference for policy makers, economic experts, researchers and ministries, and localities to involve in the process of making and implementing green economy policy in Vietnam.

Furthermore, the study will also be considered for posting to the Vietnam Economic Portal ([www.vnep.org.vn](http://www.vnep.org.vn)), under the Central Institute for Economic Management (CIEM), under the MPI in the form of working papers to provide information to researchers, policy makers, enterprises and all interested users. Thereby, it contributes to raise awareness about green economy in Vietnam.

### **6.3.2 Limitations of the study**

Despite the strengths of the study, the study within a thesis; therefore, it does not avoid certain limitations. In terms of research method, the qualitative research includes advantages and effectiveness in analyzing socio-economic topics such as the thesis topic, but it mainly focuses on theoretical issues, so the measurement of green economy through indicators such as the set of green economy dicators or green GDP indicator has not been mentioned. The reasons comes from the set of indicators for Vietnam is still under examination, moreover within the framework of a thesis it can not generally evaluate both framework theory and measurement of green economy through indicators.

### **6.3.3 Recommendations for the future research**

The study can be seen as the analysis of green economy theory in combination with the specific practice of developing countries is very interesting in order to considering further research relating to the measurement of green economy through indicators, such as green GDP indicator. The combination of qualitative research and quantitative research will make the results of the study more interesting to clarify the impacts of green economy policy on the practice even though this future study will require the complexity and beyond the scope of a conventional thesis.



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# Appendix

## Appendix 1: List of interview questions

1. *What is the concept/definition of green economy?*
    - ✓ What is the difference between concepts of green economy, green growth, low carbon development and sustainable development?
    - ✓ Which concept is widely, officially used in Vietnam?
    - ✓ According to you, what concept is suitable with the practice of Vietnam?
  2. *What are the characteristics of green economy policy in developing countries?*
    - ✓ Achievements
    - ✓ Limitations
    - ✓ In your opinion, what is the experience of green economy development in developing countries and how can Vietnam learn the experiences?
    - ✓ What are highlights of green economy policy of the countries such as China, Malaysia, etc.?
  3. *What are the conditions for a transition to a green economy?*
    - ✓ Does Vietnam meet the conditions or principles of green economy/ green growth
  4. *What are the green economy policies in Vietnam?*
  5. *How about the financial policies for green economy in Vietnam?*
  6. *What are the results of implementing green growth policy in Vietnam?*
    - ✓ Advantages /Opportunities
    - ✓ Difficulties/challenges
    - ✓ How about the implementation of green economy at local levels?
    - ✓ Recommendations for Vietnam in terms of:
- Awareness and change in thinking and policy making towards green growth?
    - Financial policy for green growth?
    - Innovation of science and technology?

- Sustainable production and consumption?
- The development and application of green growth indicators?
- The involvement of stakeholders, especially the private sector?

*7. How does Vietnam get the support of the international community in green economy development?*

- ✓ What kind of support is common?
- ✓ Which organizations have provided much support to Vietnam in recent years?

## Appendix 2: List of interviewees

	<b>Interviewee</b>	<b>Position</b>	<b>Agency</b>	<b>Date of interview</b>	<b>Length of the interview</b>
1	Participant 1	Director	Department of Public service policies, Central Institute for Economic Management, Ministry of Planning and Investment	27th June 2017 and 21st September (Interview email)	1 hour 45 minutes
2	Participant 2	Vice President	National Institute for Patent and Technology Exploitation, Ministry of Science and Technology	28th June 2017	1 hour 50 minutes
3	Participant 3	Specialist	Department of International Cooperation and Science Technology, Vietnam Environment Administration, Ministry of Natural Resources and Environment	29th June 2017	1 hour 30 minutes
4	Participant 4	Specialist	Department for Science, Education, Natural Resources and Environment	29th June 2017 and 19th September (Interview email)	2 hours
5	Participant 5	Deputy Director	Department of Environment, Ministry of Transportation	7th July 2017 And 21st September 2017 (Interview email)	1 hour 25 minutes